

Environmental Control Unit

ECU-1800 | Part # FP00050



System Overview

The ECU Series are ruggedized air conditioning systems for cooling electronics in austere and mobile applications. They maintain sealed electronics enclosures at or below ambient temperatures, enabling Commercial-Off-The-Shelf (COTS) electronics to be safely and effectively used for computing and communications in extremely hot or cold environments.

These systems have been fully ruggedized for military use and designed to meet **MIL-STD-810, -461, -1265**. The ECU Series continuously maintains a temperature of $\leq 125^{\circ}\text{F}$ (51.6°C) inside an electronics enclosure in a 125°F ambient environment removing 1800 Watts of heat. The electronics remain sealed against all environmental contamination, improving reliability.



Compact

39.4 x 47 x 29 cm
15.5 x 18.5 x 11.5 in
16.5 kg (32 lbs)



High-Capacity

Cools 1800 Watts
Heats 300 Watts



Low-Voltage

28V, 15 A
Highly Efficient

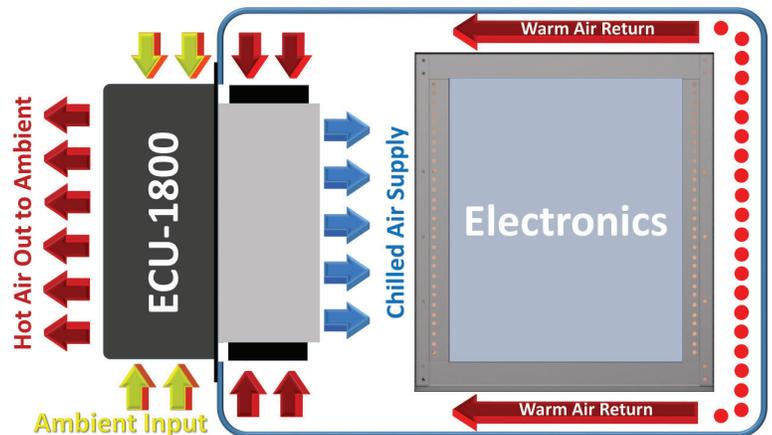


Military Grade

(Designed to Meet)
MIL-STD-810
MIL-STD-461
MIL-STD-1275

The ECU-1800's enclosed design prevents dust, moisture, and airborne contaminants from affecting critical electronics.

Its independent airflow paths ensure efficient heat removal while maintaining a clean and controlled internal environment, enhancing system durability and reliability.



Contact Us:  508-281-5322  info@aspensystems.com

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System Specifications

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Cooling Capacity	1800 W at rated conditions
Heating Capacity	300 W At 40°F (4.4°C) or below
Maximum Current	32 A at 28 VDC
*Maximum Power Draw	900 W at 28 VDC
Voltage	28 VDC (22-32 VDC)
Operating Ambient Temperature	-40 to 140°F (-40 to 60°C) At $T_{\text{ambient}} < 125^{\circ}\text{F}$ (51.6°C)
Storage Temperature	-40 to 160°F (-40 to 71°C)
Military Standards	MIL-STD 810, 461, 1275 (Qualified by Analysis)
Altitude	15,000 ft (4.6 Km)
Humidity Control	70% RH
Orientation	±15° on any axis from vertical
Weight	32 lb (16.5 Kg)
Dimensions	15.5x18.5x11.5 in (39.4x47x29 cm)

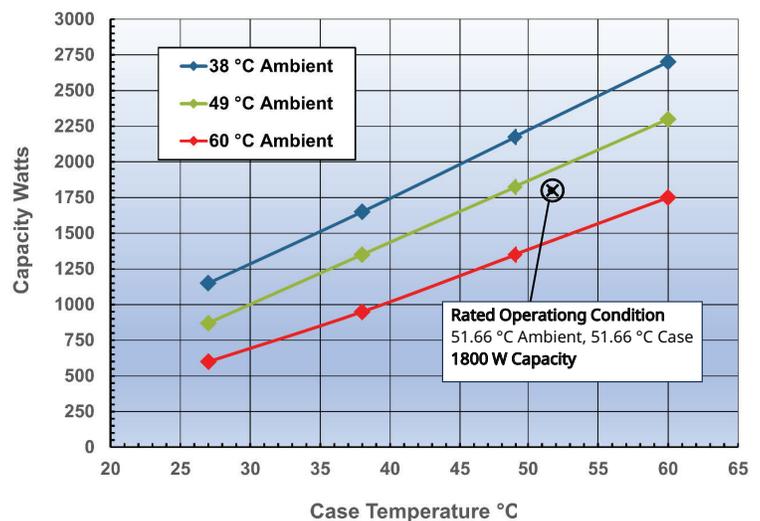
*Actual power draw will vary with ambient temperature, coolant temperature, and cooling load

Applications

The **ECU-1800** is ideal for efficient and lightweight cooling solutions in a variety of demanding environments, including:

- Military communications Systems
- Electronics Transit Cases
- Sealed Electronics Enclosures
- Ground Vehicles
- Custom Equipment Enclosures
- Harsh Environmental Applications

Cooling Performance Chart



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