

# MAINSTREAM ENGINEERING CORPORATION

## 9,000 Btu/hr, 18,000 Btu/hr, and 36,000 Btu/hr Improved Environmental Control Units (IECUs) R-410A



### Mainstream's modular Improved Environmental Control Units (IECUs)

provide heating and cooling to troop shelters, containers, vehicles, and communications enclosures in ambient temperatures as high as 140° and as low as -50°F. The IECU is available in three different nominal cooling capacities (9,000, 18,000 and 36,000 Btu/hr) with multiple power input options. Designed to replace legacy R-22 based ECUs, the IECU

features improved energy efficiency, lighter weight, and easier maintenance. The IECU uses environmentally safe R-410A refrigerant and meets or exceeds all requirements for military heating and cooling.

- ▶ Designed for Military environment
- ▶ Simple and intuitive control panel
- ▶ Software upgradable PCB controller with battle-short capability
- ▶ Removable remote provides for control at a convenient location
- ▶ Designed for maintenance or repair with common hand tools from standard military tool kit.
- ▶ Diagnostics port allows complete troubleshooting with only a multimeter
- ▶ Compatible with Handheld Prognostic Tool
- ▶ Plug and play modular components
- ▶ Soft start device helps protect tactical power grids by limiting inrush current at start up.
- ▶ Designed for 20 year storage life



# IECU Value-Added Features

## Total Unit Modularity

Every component is modular, allowing plug and play replacement with common hand tools. Brazing/soldering not required during any maintenance procedure.

## Size and Weight

IECU is the same size but lighter and more efficient than the DoD standard ECU.

## Component Access

The hinged removable top allows full access to the condenser and evaporator sections.

## Embedded Diagnostics

Embedded diagnostics and 16 board-mounted LED indicators simplify maintenance. Interfaces with Handheld Prognostic Tool.

## EMI Tested

EMI conducted and radiated emissions tested to MIL-461F

## Manual Override

The IECU includes a manual override feature that bypasses the electronics should they fail. In manual override mode, all safety lockouts are maintained.

## Simplified Operation & Maintenance

No training required for basic operation. All refrigerant components have threaded O-ring fittings that can be replaced with simple hand tools.

## Air Filter

Heavy-duty aluminum air filter is provided with the IECU. This washable filter is treated with a filter enhancing electrostatic coating to increase dust collection.

IECU Specifications				
Model	ECU09K1115	ECU18K1230	ECU18K3208	ECU36K3208
R-410A Charge	2.25 lbs	3.2 lbs	3.25 lbs	4.5 lbs
Dimensions and Weight				
Length	26 inches	28 inches	28 inches	35 inches
Width	23.75 inches	30 inches	30 inches	38 inches
Height	16 inches	20 inches	20 inches	27 inches
Weight	140 lbs	225 lbs	216 lbs	316 lbs
Performance				
Cooling Capacity @ 125°F/90°F	9,410 BTU/hr	19,810 BTU/hr	18,940 BTU/hr	41,840 BTU/hr
Heating Capacity	2.44 kW	4.26 kW	4.20 kW	8.79 kW
Power				
Power Connection	115 VAC, single-phase, 50/60 Hz	230 VAC, single-phase, 50/60 Hz	208 VAC, 3-phase, 50/60 Hz, 5-wire	208 VAC, 3-phase, 50/60 Hz, 5-wire
Maximum Current <i>Inrush</i>	29.2 amps	19.7 amps	18.1 amps	34.4 amps
Minimum Circuit Ampacity	25 amps	20 amps	13 amps	27 amps

**Handheld Prognostic Tool (EPT-1000)**

