



## ENHANCED - TRAY RATION HEATING SYSTEM (E-TRHS) | DoD CFD

### PURPOSE:

The Enhanced - Tray Ration Heating System (E-TRHS) is a USMC group field feeding platform designed to feed 250 Warfighters. It fills a logistical gap that exists between providing Marines individual rations (MRE™, MCW/ LRP) and utilizing USMC or Army Logistics Civilian Augmentation Program (LOGCAP) to serve UGR-A™ menu items (or the 14 or 21-day CONOPS A-Ration Menu). UGR-H&S™, UGR-A™, and UGR-B™ menu items can be stored, prepared and served by the E-TRHS.

### CHARACTERISTICS:

The E-TRHS uses the kitchen-in-a-box concept. All of the required cooking appliances, utensils, and serving wares are packed in an easily transportable container. The container also carries a military standard refrigeration system. When a suitable cooking and serving site is found, the box is opened up, the kitchen is set up outside the container, the refrigeration is turned on and the container is filled with semi-perishable or perishable food. The container is the Small Field Refrigeration System (SFRS) and uses a Thermo King VM405 PBBD2 Refrigeration Unit (RU; already supported in the field). The cooking appliances consist of a tray ration heater, which can boil 20 gal (76 L) of water in less than 20 min, and two M-59 field ranges. All of the associated equipment, such as tentage, tables, pan carriers, and spatulas, are also contained within the SFRS. The E-TRHS provides cooking flexibility, allowing the cook to boil, simmer, pan fry, grill or roast available rations. The kitchen uses the USMC single fielded burner, reducing supportability risks for the program. The kitchen requires power and fuel (JP-8 or approved diesel) to operate.



### CAPABILITIES & BENEFITS

- Is capable of supporting forward feeding with multiple deployment scenarios.
- Supports preparation of complete UGR-H&S™, UGR-A™, and UGR-B™ menus.
- SFRS enables easy transportation and then converts to refrigerated storage for rations at temperatures from 33°F to 40°F (.56°C to 4.4°C) and frozen rations at temperatures from -5°F to 32°F (-21°C to 0°C) in ambient environments up to 122°F (50°C).

### COMMENTS:

The E-TRHS fielding requires integration of separately procured parts. The First Unit Equipped is planned for March 2010.

The system was originally developed around a smaller refrigerated container called the Quadcon Refrigerated Container System (QRCS). Because the SFRS is more easily supported, this larger container was selected as the ETRHS container. The larger volume of the SFRS may allow for additional components (sanitizing sinks) to be added to the system as follow on efforts.

### POINT OF CONTACT:

#### Combat Feeding

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### AT A GLANCE:

#### ■ DIMENSIONS:

8 ft L × 6-5.5 ft W × 8 ft H (2.4×1.9×2.4 m)

#### ■ WEIGHT:

- Max. Gross Weight: 15,000 lbs (6,750 kg)
- Tare Weight (including RU): 3520 lbs (1,584 kg)
- Max Payload Weight: 11,480 lbs (5.166 kg)

#### ■ VOLUME:

300 cubic feet (8.5 cubic meters)

#### ■ COOLING CAPACITY:

- 10,500 BTU/hr @ 35°F-110° (1.7°C - 44°C)
- 5200 BTU/hr @ 0°F-110°F (-18°C - 44°C)

#### ■ UTILITIES/POWER:

208/230 VAC, 3-Phase, 50-60 Hz, 10-14 A Nominal Current Rating

#### ■ TRANSPORTATION:

Transportable by USMC MTRV or LVS