

CHAPTER 10 MEDICAL FIELD FOOD SERVICE EQUIPMENT

THE ARMY MEDICAL FIELD FEEDING SYSTEM

The AMFFS provides responsive, flexible, and mobile food service support to medical units in the field. Major equipment includes the MKT (for MASH units), FKM (Figure 10-1), and the SC. The FCIHW and food preparation and service sets furnish

additional items to support the patient feeding mission. The FKM and SC are housed in a TEMPER (Figure 10-2, page 10-2) while subsistence storage and the dining areas utilize GP tents.

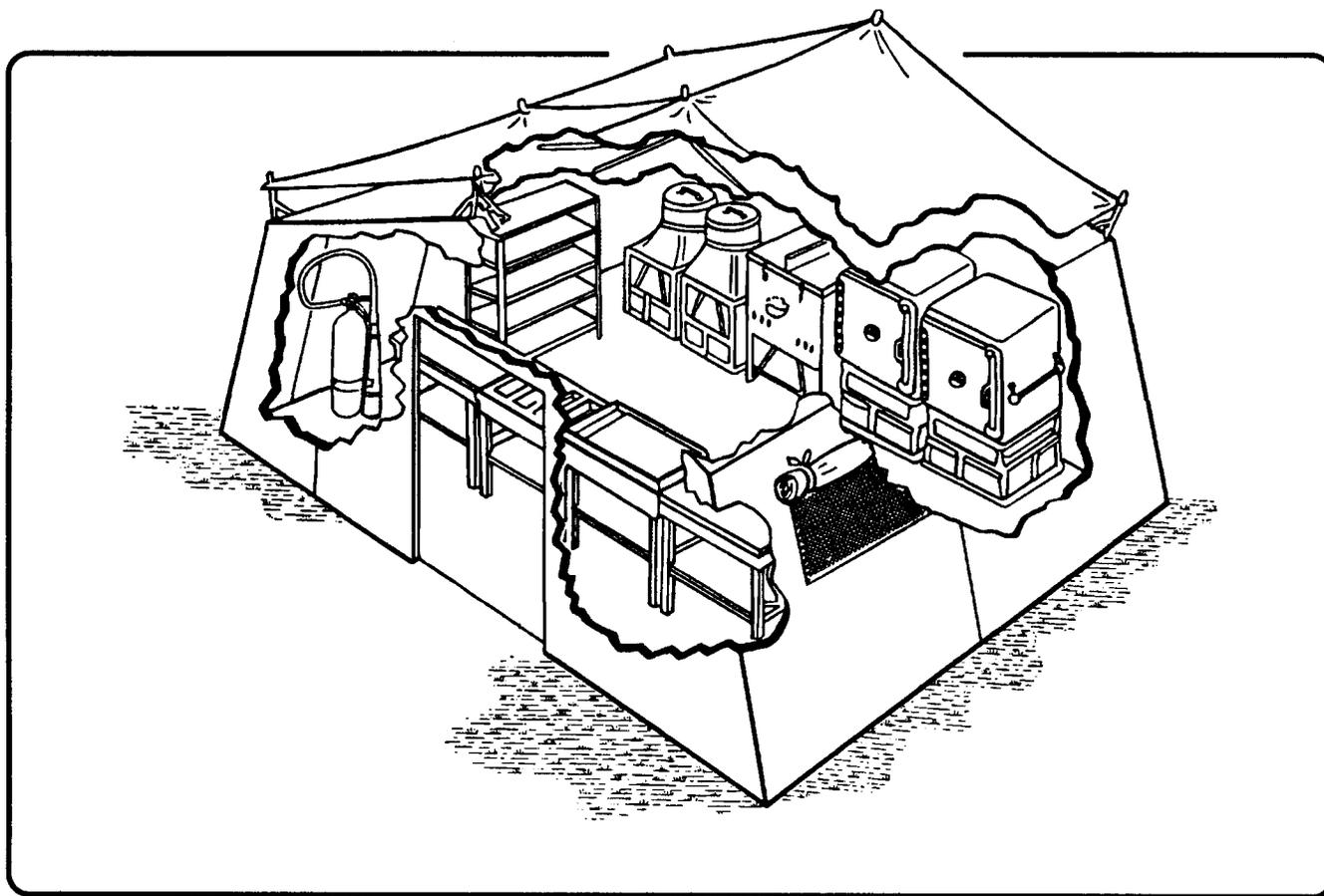


Figure 10-1. Field kitchen modular (FKM)

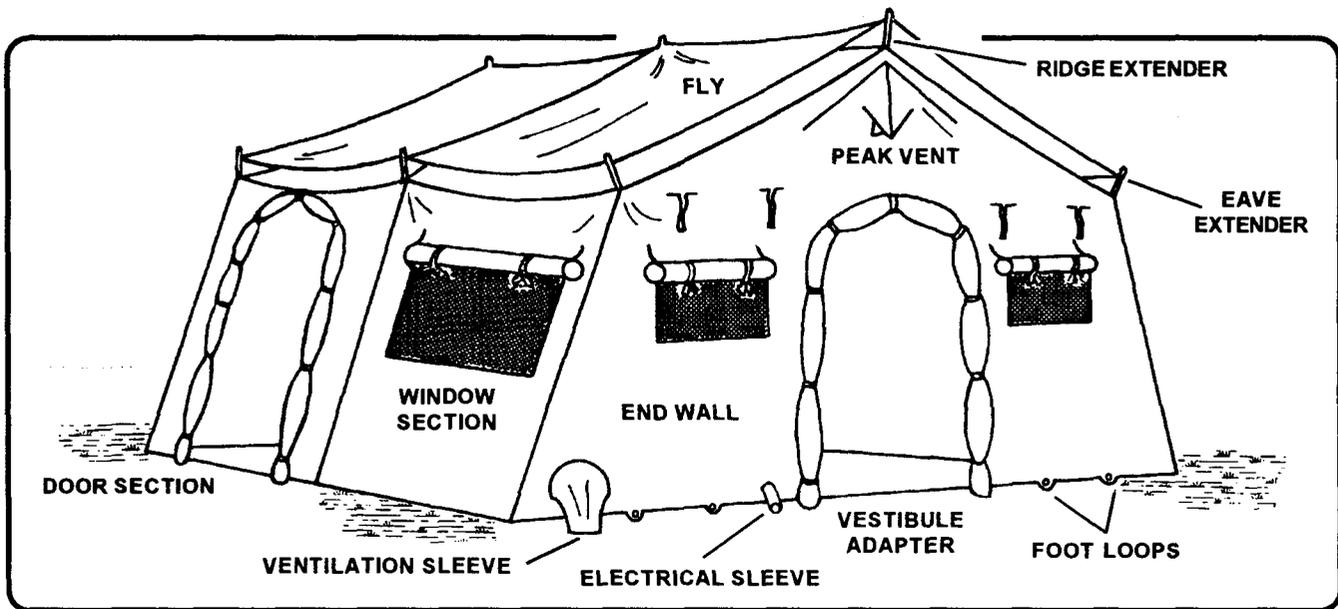


Figure 10-2. TEMPER tent

FIELD KITCHEN MODULAR

The FKM is issued to all hospital units except the MASH. Each FKM is designed to support up to 250 personnel, to include organic unit personnel and patients, with A-, B-, medical B-, or T-Rations.

Description

Because the FKM is modular, it can be consolidated with other FKM modules to feed larger units. In cold regions, entrances to the tents should have vestibules with doors attached to cut down on air exchange (Figure 10-3, page 10-3). The FKM and SC can be made into a complex by connecting vestibules (Figure 10-4, page 10-3). Equipment can be arranged to provide preparation and cooking areas and serving lines. FKM equipment is transported by a 5-ton truck with a 1 ½ ton trailer. The basic items of issue for the FKM are in Table 10-1, page 10-4.

Set Up

The following are steps for setting up the FKM:

- Set up the temper according to TM 10-8340-224-13&P.
- Set up the two worktables.

- Remove the four small locking bolts from the legs of the griddle stand assembly, unfold the legs, and replace the locking bolts. Position the griddle stand and level it using the level adjustments.
- Repeat the above steps for the steam table assembly.
- Assemble the exhaust assembly and position it between the griddle and steam table stands.
- Assemble the steam top and place it on top of the steam table assembly.
- Place the oven on top of the burner base and install the burner in the rack. Repeat the steps above for the second oven.
- Place the pot cradle on top of the burner base and install the M2 burner unit. Repeat these steps for the second pot cradle assembly.
- Assemble the storage and drying rack.
- Place the storage cabinet assemblies in the desired position.
- Position the heater cabinet with the drain hose.
- Attach the can opener to the appropriate worktable.
- Arrange the meal carriers and remaining accessories in accessible locations.

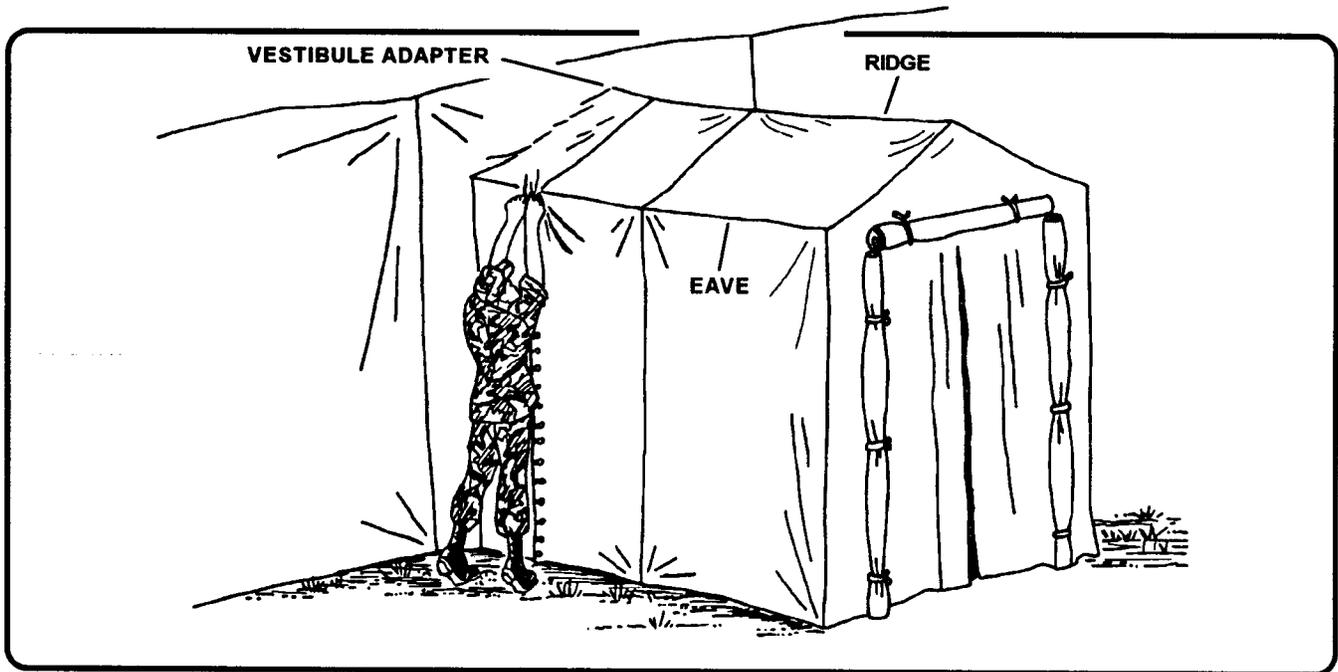


Figure 10-3. Vestibule section laced to the adapter

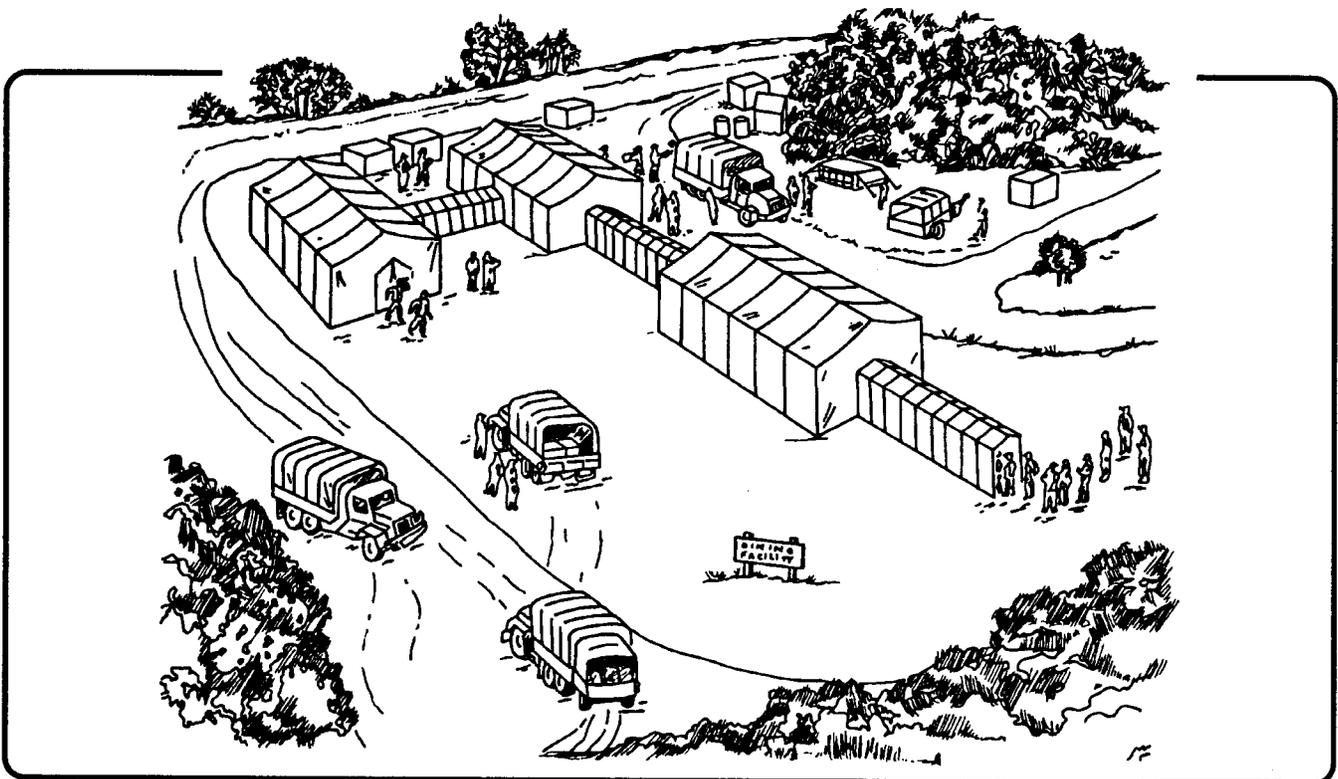


Figure 10-4. TEMPERS connected by vestibules

Table 10-1. Basic items of issue for the FKM

NOMENCLATURE	QUANTITY
Antiseize, compound	1
Bag, drinking water and storage	2
Base, rack assembly	2
Beverage dispenser, 5-gallon	17
Biscuit, cutter	1
Board, food slicing and chopping	2
Brush, wire	1
Burner, rack assembly	2
Burner unit, M2/M2A	6
Butcher's steel	1
Cabinet storage assembly	2
Can, friction, top	1
Can, gasoline, 5-gallon	5
Can opener, hand, tray pack and round cans	2
Can opener, table mounted	2
Can opener, tray pack	2
Can, water, plastic, 5-gallon	5
Cleaner, burner, slot	1
Colander, SS, 16-quart	1
Cover, full size	3
Cover, half size pans	6
Cover, stock pot	4
Dipper, no 56	2
Fire extinguisher	3
First aid kit	1
Fork, 15-inch	3
Fork, 21-inch	3
Generator, preheater	6
Griddle assembly (base, top 3 guard and grease chute and plug)	1
Hammer, hand, 16-ounce	1
Ice, pick	1
Knife, boning	2
Knife bread	1
Knife, cooks	2
Knife, paring	2
Knife, slicing	1
Ladle, 2 oz	2
Ladle, 8-ounce	2
Lantern, gasoline	3
Lifter, tray pack, serving	1
Lifter, tray pack, extracting	1
Lubricating oil, general	1
Meal carrier, insulated, remote squad (each with three inserts and three covers)	8
Measure, liquid, 2-quart	2
Measuring spoon set	2

Table 10-1. Basic items of issue for the FKM (continued)

NOMENCLATURE	QUANTITY
Nozzle, spout, can, gasoline	1
Oven assembly (oven, base, rack, four shelves, and two exhaust caps)	2
Pad, bakery	4
Pan, baking, rectangle	10
Pan, roasting and baking, bottom	5
Pan, roasting and baking, top	5
Pan, serving line, 4-inch full	3
Pan, serving line, 4-inch half size	6
Peeler, potato	2
Pin, rolling, wood, 23- by 3 3/4-inches	1
Plate, splash, pot	2
Pliers, slip joint	1
Pot cradle assembly (cradle, base, and rack)	2
Pot, stock, 10-gallon	2
Pot, stock, 15-gallon	2
Pump, inflating	1
Rack assembly, storage and drying	1
Roll, cutlery	1
Scraper, baker	1
Screwdriver, flat	1
Screwdriver, Phillips	1
Server, pie and cake	1
Sifter, flour, hand	1
Skimmer	2
Spatula	2
Spoon, serving, slotted, 15-inch	8
Spoon, food service, basting	4
Spoon, food service, 21-inch	4
Steam table assembly (base and three inserts)	1
Stone, sharpening	1
Tent, extendable, modular (16- by 20-foot) utility (see separate list for components)	1
Tentage repair kit (modified)	1
TM 10-7360-204-13&P (1)	1
TM 10-7360-208-13&P (1)	1
Tongs, food service, SS, 12-inch	3
Tool, chest	1
Trash barrel, plastic, 32-gallon with lid	2
Turner, food	3
Wrench, combination	1
Whip, wire	1
Worktable with shelf	2
Wrench, adjustable, crescent, 8-inch	1

Configurations

One of the best features of the AMFFS is its flexibility. The FKM and the SC can be set up separately with or without vestibules and vestibule doors, or they can be consolidated into varying configurations. For ease of operation, it is often desirable to attach the FKM and the SC by a vestibule.

Components

Major components of the FKM include grills, steam tables, ovens, tray-pack heaters, pot cradles, storage cabinets, and racks and work tables.

Griddle, oven, and pot cradle. The griddle (Figure 10-5), the oven (Figure 10-6), and the pot cradle assembly, with M2 burners, are provided for roasting, baking, grilling, boiling, and maintaining serving temperatures of hot foods.

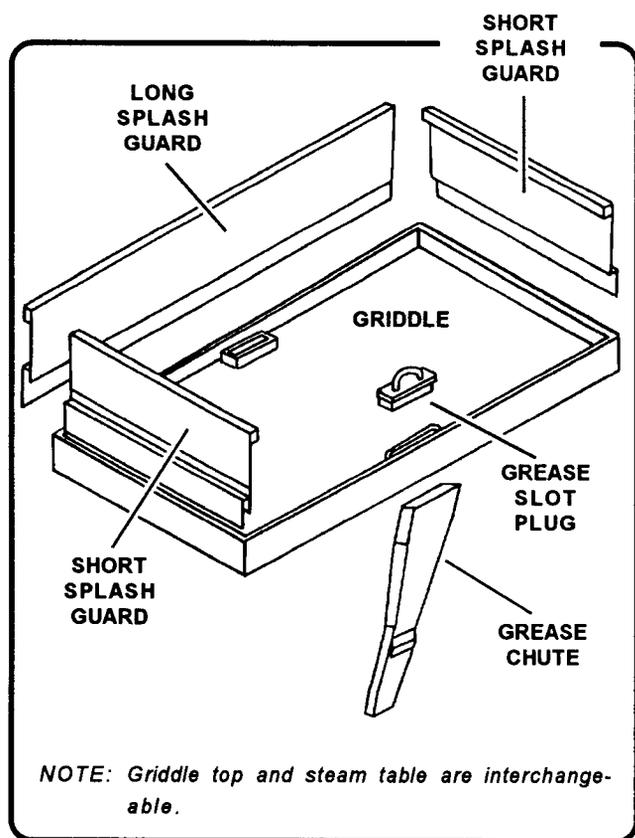


Figure 10-5. Griddle top assembly

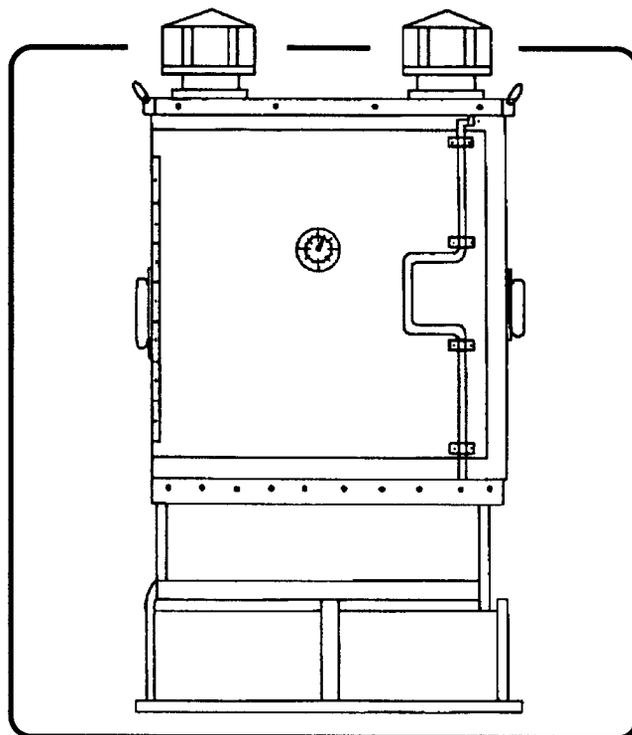
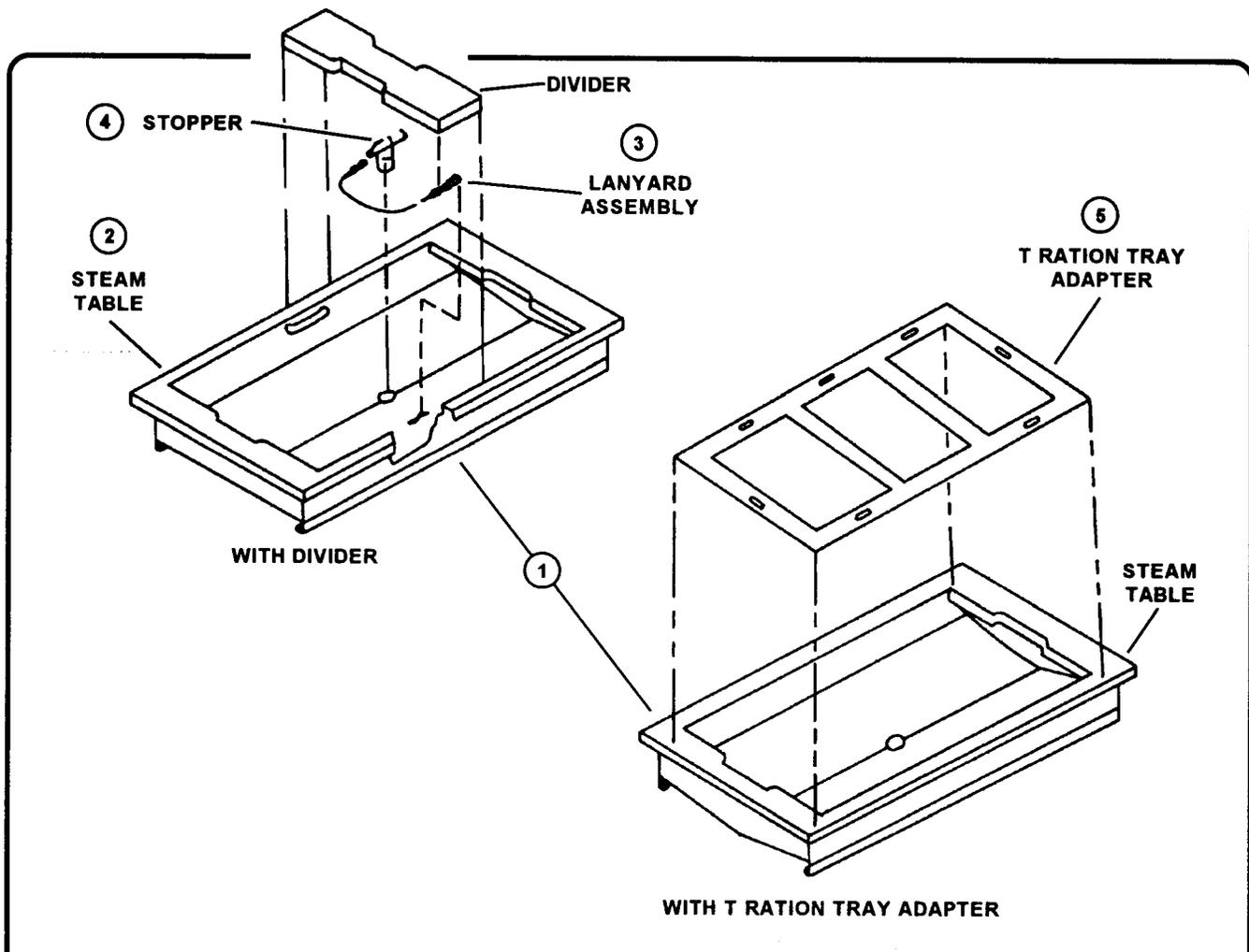


Figure 10-6. Oven assembly

Steam table. The steam table (Figure 10-7, page 10-6), with M2 burner, is used to keep hot foods hot on the serving line throughout the serving period.

Steam table adapters. The FKM comes with three adapters to aid serving procedures. There are one-hole, two-hole and four-hole adapters. They are used with baking and roasting pans, line pans, tray packs and plastic inserts for serving. When the one-hole adapter is used with two baking and roasting pans, the adapter is placed all the way to one end of the steam table. The two-hole adapter can be used with a baking and roasting pan and tray packs, plastic inserts, or line pans.

Worktables, serving tables, and storage racks. These tables are used for mixing, assembling, and chopping ingredients; serving line counter space; and cleaning pots and pans in the SC. The storage rack can also be used to transport and to store rations.



(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO	(b) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER	FSCM	UNSALE CODE	U/M	QTY INC IN UNIT
C-6	①	PAFZZ		5-13-2827	81337	GROUP 010103 Steam Table Top Assembly; Knock-Down, Field	EA	1
C-6	②	MFOOZ		5-13-2829	81337	Steam Table	EA	1
C-6	③	XBFZZ		5-13-2830	81337	Lanyard Assembly	EA	1
C-6	④	XBFZZ		5-13-2828-10	81337	Stopper	EA	1
C-6	⑤	PAFZZ		SF-F-224	81337	Adapter, Tray Rack, Steam Table	EA	1

Figure 10-7. Steam table top assembly, knock-down, field

Food storage cabinets. These cabinets (Figure 10-8) are used mainly to store food and to maintain pastries and desserts.

Heater tank assembly. The heater tank assembly (Figure 10-9), filled with water and with the M2 burner in place, heats up to 24 tray packs.

Insulated food containers. These containers hold hot foods and maintain serving temperatures prior to serving.

Insulated beverage dispensers. These dispensers have a 5-gallon capacity and are designed to maintain beverages, hot or cold, as required, for both on-site and remote site feeding.

Additional kitchen components. These components consist of gasoline and water cans, preparation and serving utensils, and other minor equipment required for food preparation and serving.

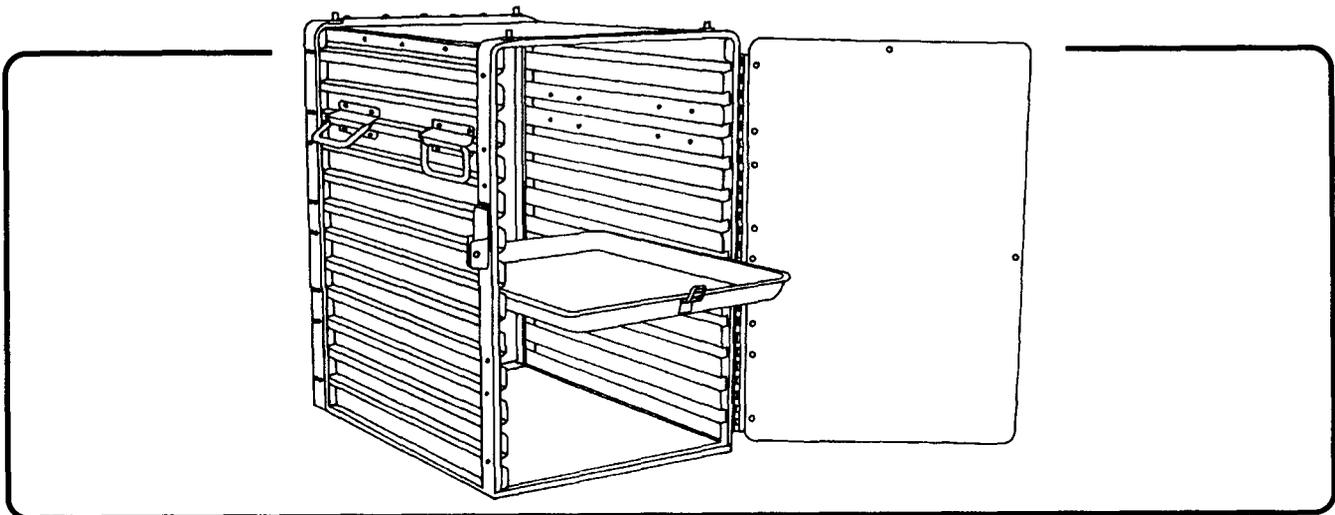


Figure 10-8. Food storage cabinet

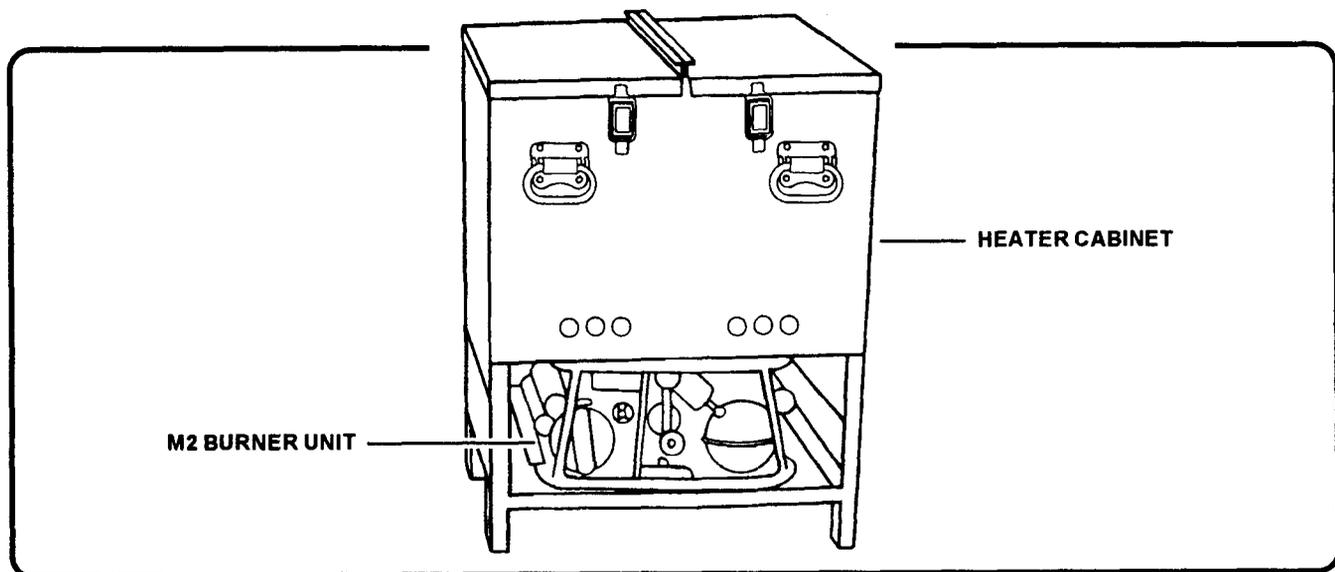


Figure 10-9. Heater tank assembly

TEMPER

The TEMPER is provided in three configurations for use in field hospitals. They are 16 feet by 20 feet, 32 feet by 20 feet, and 48 feet by 20 feet. The 32-foot by 20-foot and the 16-foot by 20-foot TEMPERs are used with the SC. The 48-foot by 20-foot TEMPER is used with the FKM. The fabric for one 8-foot section is provided with doorways on each side and screened roof vents with flaps. The fabric for the other section is provided with windows on each side and one stove pipe opening. The roof vents are designed to remove excess kitchen heat and/or fumes. For cold weather operations, the TEMPER is equipped with a cotton liner and, if needed, an additional insulated liner. The TEMPER has a tent fly to reduce solar heating in hot environments and to permit the roof vents to be opened in inclement weather. The TEMPER frames and fabric can be hooked together, in 8-foot sections, to form a shelter of any length.

Setting Up and Dismantling

The first step in setting up the FKM is to erect the 16-foot by 20-foot TEMPER. This tent consists of an outer fabric with attached ridge and eaves guy lines, foot stops, and sections of an aluminum frame assembly. The tent has four doors, one on each side for serving and one in the center. There are two large screened openings in the roof section with a movable outer cover. The sides and ends have large screened openings with foul-weather curtains and a see-through plastic covering for light.

Inspection, Installation, and Operation

Inspect, install and operate the TEMPER as discussed below.

Inspection. When you receive the shipping container, inspect it carefully for any damage that may have occurred during transport. Damaged shipping containers indicate damage may have occurred to the enclosed tent. Inspect the unpackaged tent compartments to ensure that all components

are present. Report any missing components to the proper authority.

NOTE: *During installation, carefully inspect all components for holes, tears and cuts; broken or missing stitching; and mildew or evidence of abrasion or wear. Inspect attaching and connecting hardware for damaged or unserviceable items. Report damaged or unserviceable items to the proper authority.*

Installation. Certain procedures must be followed when setting up the TEMPER. Personnel requirements and site selection are briefly discussed below.

Site selection. Select the site for erecting the TEMPER according to the fictional requirements and convenience to other elements of the installation. If possible, select a site which is fairly level with good clearance. If drainage is questionable, dig drainage ditches around equipment for water to run out of the area. Clear the area of rocks, stumps, or debris that might damage the shelter fabric. Further guidance for site selection is provided in Chapter 5. Detailed instructions on setting up and striking the TEMPER are in TM 10-8340-224-13&P.

Personnel requirements. Under average field conditions, four to six soldiers can set up the TEMPER (two arches) and have it ready for use in about 30 minutes.

Operation. The two types of sections available are the door and window sections. These sections are also available in either a desert, tropical, or temperate version. All sections are in 8-foot lengths and use the becket lace method with 2-inch wide Velcro on the weather seal to ensure that the connections are weather tight and light sealed. They are designed to keep heavy winds from creating openings or gaps.

Sectionalized liner. Two types of sectionalized liners are the end section liners and the intermediate section liners. These liners are secured by tie tapes. They use Velcro fasteners to attach additional sections. The liners are a light color and can be laundered in standard field laundry equipment.

Sectionalized fly. The size of the fly sections are compatible to the roof surface area. The fly sections are connected by the same method as the tent sections.

Fabric partition. The partition allows the interior tent area to be divided into functional areas. The partition includes a doorway (flap opening) and provisions for being secured to the floor.

Transition section (vestibule). This section provides a protective passageway from one tent to another while also providing for blackout protection.

Operation in Extreme Cold

Erect the tent, hang the arctic liner, and install the tent liner. Ensure that all windows, doors, and weather seals are properly installed. Place heaters along the base of the TEMPER using duct work. If you are using a large number of sections, alternate the heat ducts. The Army's 120,000 BTU space heaters work well in subzero temperatures. Place a ground cloth on the ground and then erect the tent. Pack snow around the base of the tent to prevent cold air from leaking into crevices. Becketing hooks help when untying frozen laces in cold weather or when wearing insulated gloves. Be sure to provide some way for the

gases from the M2 burners to escape when using the cold weather kit with the TEMPER. For example, make an opening at the top of the tent through places where the liner meets. Open the tent vent at that point as well.

NOTE: Carbon monoxide danger is greatest when winds are calm or still. It is reduced when winds are moving. Ensure that food service personnel rotate kitchen and outside duties and follow all safety precautions in TM 10-7360-204-13&P.

Maintenance

To erect the TEMPER properly, certain maintenance procedures must be followed. These procedures are discussed below.

Tools and equipment. No special tools or equipment are required by operator or crew personnel for maintaining the TEMPER. However, in arctic regions, the becketing hook is essential, especially in untying frozen laces. A pin puller is also essential when tent pins are frozen in the ground. Both items can be manufactured locally. See Figure 10-10. A 2 ½-pound sledge hammer is also useful in arctic regions.

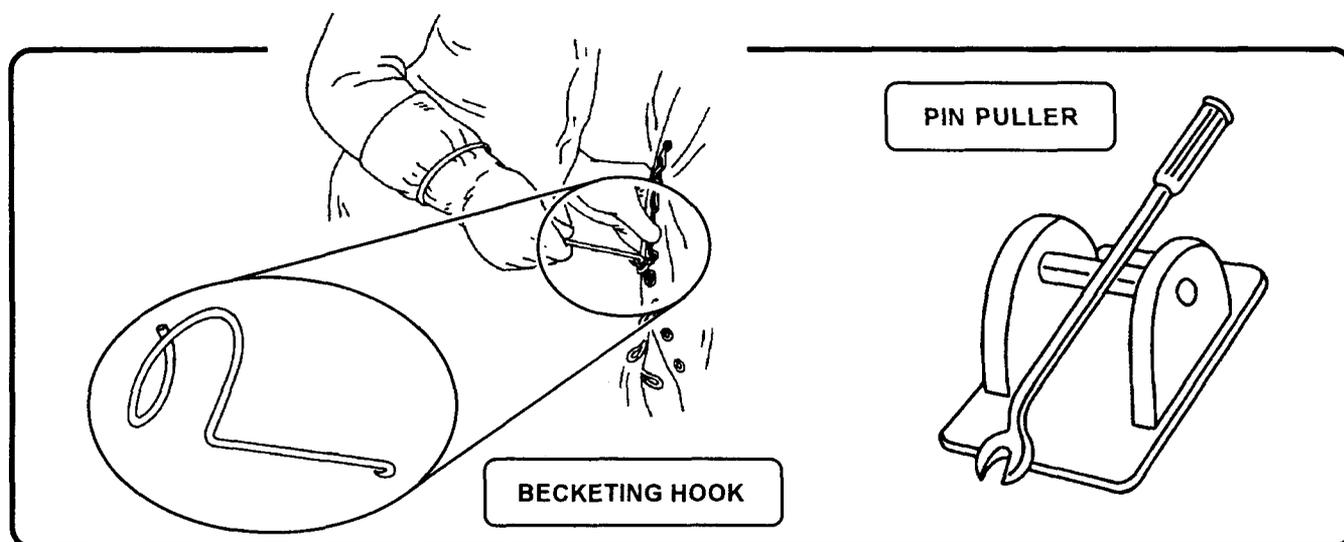


Figure 10-10. Becketing hook and pin puller

Inspection. To ensure that the TEMPER is ready for use at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. Defects discovered while the shelter is being used will be noted for correction as soon as its use is discontinued. Stop use immediately if a deficiency is noted which would damage the shelter with continued use. Record deficiencies and shortcomings together with the corrective action taken on DA Form 2404 as soon as possible.

SANITATION CENTER

The SC consists of equipment required to clean and sanitize the food service equipment, patient and staff eating utensils and trays. One SC will be issued to each FKM and MKT (in the MASH). The SC and SC set-up procedures are in Chapter 9 and the operation instructions are in Chapter 12.

FOOD CONTAINER, INSULATED, HOSPITAL WARD

The FCIHW is a lightweight litter-borne food transport system (on a wheeled gurney or is two-person portable) used to protect food, maintain temperatures, and transport and serve complete regular and/or modified solid and liquid meals prepared from A-, B-, medical B-, and/or T-Rations. It is used in field medical units required to provide food service to patients unable to go to a central feeding and dining area.

Function

The basic unit (Figure 10-11) consists of two, four-sectioned wall units, two accessory boxes, and a beverage and utility unit. It can transport 20 complete regular and five special diet meals. A supplemental litter-borne carrier will be used to transport liquid diet components separately, as required, using nine additional 1.5- to 2-gallon beverage containers. Required trays, flatware, and glasses are prepositioned on each ward. A ward serving line is set up by supporting FCIHW transporters on litter stands or wheeled gurneys. After the meal

service, the FCIHW will be loaded with soiled utensils, dinnerware and meal refuse. It is returned to the sanitation center for cleaning and sanitizing.

Transport

The capacity of each transport unit, coupled with the ward census, may permit service of multiple wards from one transporter. FCIHW units will be mounted on a standard North Atlantic Treaty Organization (NATO) litter for movement to ward locations. The basic unit (with or without the use of a wheeled gurney) will be transported to ward locations by two unit personnel. A four-person litter team or a wheeled gurney may be required to transport the supplemental carrier or rack when it is fully loaded with liquid components.

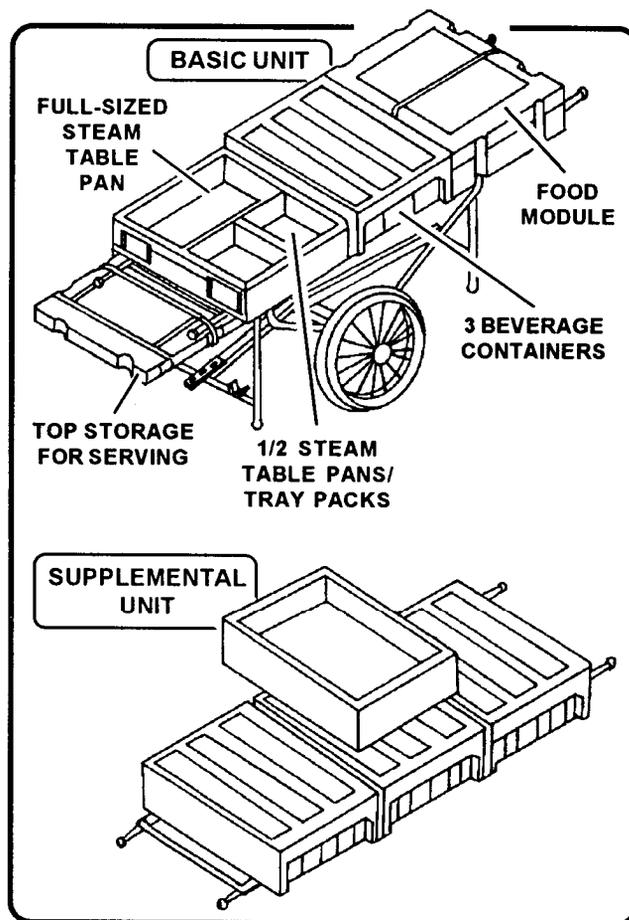


Figure 10-11. Food container, insulated, hospital ward (FCIHW)