



ITT

Mobile Maintenance Shelter (MMS)

Meets MIL-S-55286E specifications to provide optimum performance in the most demanding field conditions.



Engineered for life

Photos courtesy of the U.S. D.O.D. and ITT Corporation.

The MMS provides a mobile maintenance workshop suitable for the operation, troubleshooting, repair and transport of electronic equipment.



Mobile Maintenance Shelter (MMS)

The Mobile Maintenance Shelter (MMS) uses a modified S-280 C/(G) shelter and power system based on two MQ Power DCA-25USIXF diesel generators. The shelter and power system are mounted on International Organization for Standardization (ISO) dimensioned (20' x 8' nominal) pallets. Each pallet system weighs approximately 10,000 lbs. (4,545 kg) and is designed to mount on a flatbed truck with ISO locking mechanism for transport.

System Description

The S-280 shelter provides optimum performance under the most demanding field conditions and is constructed to meet MIL-S-55286E specifications. The basic S-280 shelter is modified to create a mobile maintenance workshop suitable for the operation, troubleshooting, repair and transport of electronic equipment. Modifications also accommodate the occupancy of personnel to perform maintenance activities. The shelter can be modified with a variety of options that can include:

- Environment control system
- Refrigerator
- Chairs with tie-down restraints for transport
- Work surfaces with integrated tie-down restraint system and storage drawers
- Shelving with integrated tie-down restraint system
- Electrostatic discharge connect points
- Magnifier lamps
- Mission clocks
- Fire extinguisher
- Flashlight
- First aid kit

- Eye wash station
- Axe
- Sledgehammer
- Configurable in-floor equipment tie-down restraint system
- Broom and dust pan
- Waste basket
- Exterior antenna brackets
- Power system monitor/annunciator panel
- Input/Output (I/O) entry panels
- Equipment cabinets with shock isolated mounting
- Overhead fluorescent lighting with emergency back-up lighting
- Smoke detector/alarm
- Carbon monoxide detector/alarm
- Surface mounted raceways for cables
- Scotch® brand tread slip-resistant floor covering
- Additional floor and wall reinforcement panels

Shelter Electrical System Components

- I/O panel with Military-Specification (Mil-Spec) connector (4-conductor, separate safety ground) and earth grounding stud
- Shelter input power: 3-phase, 208-240 Volt Alternating Current (VAC) @50/60 Hertz (Hz)
- Shunt type 3-pole 100 ampere (Amp) main breaker
- Emergency Power Off (EPO) switches
- 3-pole load center
- Receptacles to accommodate any local requirement
- Exterior Ground Fault Circuit Interrupter (GFCI) courtesy outlets
- Storage/transport switch

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The Environmental Control System (ECS) consists of two Environmental Control Units (ECU). Each ECU provides a maximum of 18,000 British Thermal Units/Hour (BTU/Hr) (3 tons) for cooling and 30,709 BTU/Hr (9 kW) for heating.

Both of the ECUs are controlled with one thermostat that automatically calls for cooling or heating as required. The

thermostat has an integrated Lead/Lag switch that allows the operator to equalize run time on the units and manually select which ECU will function as the primary and.

The ECS can be designed to suit a variety of load requirements to meet local environmental conditions.

Power System

The power system is designed to operate on a shore power connection or two MQ Power DCA-25USIXF diesel generators rated at 20 kilo Watts each that can be configured to provide a range of voltages; three-phase 208 - 480 VAC @ 60 Hz, single-phase 120 - 220 VAC @ 60 Hz. Each generator is fitted with a 104 gallon extended run fuel tank. Fuel consumption is 1.4 gallons per hour under full-load operation. Each generator is fitted with an auxiliary block heater and battery charger that run off of shore power to keep the generators ready for operation.

The generator power system includes a power transfer module that provides the intermediate connection point between the generator/shore power and the shelter. while housing the following components:

- Automatic Transfer Switch (ATS)
- Manual Transfer Switch (MTS)
- Main I/O Panel
- Auxiliary I/O panel

The ATS provides switching between generator one and the output of the MTS. The MTS provides switching between generator two and shore power. This configuration provides automatic switching between generator one and generator two or between shore power and generator one depending on the selection of the MTS. This provides the shelter with automatic back-up power when deployed and running on generators only or

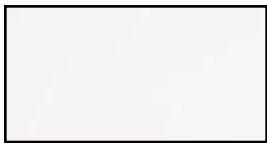


when in station and connected to shore power. The ATS also controls the startup and shutdown of the generators.

A manually operated cable reel assembly is provided for cable storage.

The power system has an EPO switch, that when activated, will shut down power to the shelter and shut down the generators when in use.

Paint Finishes



Shelter Interior Ceiling
Semi-gloss White
Color number 27875
per MIL-PRF-22750F, Type I



Interior Walls
Semi-gloss Green
Color number 24533
per MIL-PRF-22750F, Type I

Shelter Exterior and Interior of Personnel Door
Chemical Agent Resistive Coating (CARC)
per MIL-DTL-53039

Power System Components
CARC per MIL-DTL-53039

Pallets
CARC per MIL-DTL-53039

System Equipment



Cable Reel



Generator



Power Transfer Module



ECS



Refrigerator

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