



“CASPIAN”

First Aid / Surgery / Recovery Trailer

Print #2502

Approximate Interior Dimensions

Length	27' 6" (8.38M)
Width	7' 6" (2.29M)
Height	7' 0" (2.13M)

1. TRAILER AND BODY CONSTRUCTION:

- A. All steel heavy-duty trailer chassis shall consist of two longitudinal frame members with structural shape cross members, outriggers and gusseting; custom-designed and equipped to support the trailer unit and interior load. Critical areas shall be strengthened by the use of additional cross members and gusseting where deemed necessary. An electrically welded perimeter shall be provided around frame. All steel material shall conform to ASTM specifications.
- B. Running gear shall consist of a heavy-duty 24,000-pound tandem, bogie axle assembly with sealed electric brakes on all axles. Each axle installed shall be rated at 6,000 pounds capacity and equipped with matched tires, wheels and springs. Axle assemblies shall be mounted to a steel under-carriage specially designed to resist torsional twisting and to maintain proper weight distribution.
- C. Trailer to be equipped with electric brakes with connections to towing vehicle. Includes drawbar coupler and hoist, meeting SAE-ICC requirements, safety chains, safety breakaway and landing gear. Reinforced frame drawbar for heavy-duty service.
- D. Trailer shall be equipped with running lights, reflectors, markers and wiring in accordance with D.O.T. safety regulations. The system shall be 12-volt with plug-in connection to towing vehicle. Running lights shall be installed within chromed brush guards.

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1. TRAILER AND BODY CONSTRUCTION: Continued

- E. The trailer shall be equipped with a full width, steel rear bumper. The bumper shall have reflective stripes to give an indication of the width of the trailer.
- F. General body wall construction shall consist of roll-formed “C” channels, 8.625 inch high by 1.75 inch deep, 3003-H14 aluminum alloy, .080 inch thick. The channels shall run horizontally the entire length and width of the unit and shall be secured to aluminum corner posts, roof rail and lower rail using 3/16-inch brazier head aluminum rivets. Finished exterior body surfaces shall be smooth with no rivets.
- G. The roll-formed “C” channels shall comprise the exterior body sides and end panels. The channels shall be fastened together along their full length with Plexus, or equal, high-performance adhesive specially designed for metal bonding (same as widely used in transportation, marine, and aviation industries). The bond formed has a tensile strength of approximately 2,500 PSI (strain-to-failure ration greater than most commercial mechanical fasteners); temperature resistance range of -67° F to +250° F; chemical resistance; high-fatigue endurance; and impact resistance.
- H. Each wall section shall be reinforced with vertical aluminum members, which are welded on a minimum of 48-inch centers.
- I. The roof carlines shall be aluminum extrusions, 6063-T6 alloy, which shall be welded to the roof rail on 16-inch centers. The roof assembly shall consist of a one-piece, .040-inch aluminum roof. Roof panel to be secured around perimeter with adhesive and 3/16-inch brazier head aluminum rivets to aluminum extruded roof rail.
- J. All window and door openings shall be framed with welded aluminum structures and gusseted to prevent torsional twisting. Heavy-gauge metal tapping plates shall be installed between frame members to secure heavy wall-mounted equipment as per custom body floor plan. Around perimeter of interior body at ceiling, an integral part of roof rail is provided to secure ceiling, side panels and overhead cabinets. At ceiling, there shall be installed tapping plates to permit positive securing of light fixtures.
- K. Floor crossmembers shall be 4-inch deep trailer “I” beams spaced on 16-inch centers.

2. INSULATION:

Body shall be insulated on sides, ends, floor and ceiling with foamed-in-place urethane. Insulation offers optimum environmental protection; adds support to sides, ends and roof; prevents entrance of moisture; and acts as a sound retardant. (Minimum: R-12.)

3. WALLS AND CEILING:

- A. The interior walls shall be lined for full width and length with 1/4-inch thick laminated formica panels. Panels shall be secured with joiners, edgings and moldings specifically designed for this purpose.
- B. Ceiling shall be surfaced with NUDO Products, FiberCorr, or equal, ceiling panels, consisting of .090-inch FRP overlay laminated to a corrugated plastic core.

4. FLOOR:

- A. Between cross sills, secure 26-gauge galvanized sheet to fully enclose floor area. Above cross sills, secure 3/4-inch thick plywood which is laminated on both sides with fiberglass-reinforced-plastic panels. The panel edges to be treated with edge-sealer for water resistance. Underside of floor panels exposed to road shall be sprayed with Quaker Koat, or equal, sound-deadening undercoating.
- B. Floor shall be surfaced with anti-static tile in Surgery Room and heavy-duty linoleum in remainder of trailer.

5. PAINTING PROCEDURES:

- A. Body exterior shall be thoroughly cleaned, sanded and primed with PPG urethane primer. Body shall be painted with two (2) coats of PPG polyurethane topcoat, one color of buyer’s choice.
- B. Steel structural trailer chassis undercarriage shall be painted black.
- C. Body shall be undercoated with Quaker Koat, or equal, sound deadening undercoating.

6. ENTRANCE/EXIT DOOR(S):

- A. Shall be pan-type, constructed of 0.125-inch aluminum with aluminum tube reinforcement. Shall be insulated with urethane and close on dust-sealing neoprene extrusions. Door(s) shall include safety-glass window with designer venetian blinds plus double-acting door latch meeting FMVSS #206 standards with keyed lock. Hinges shall be stainless steel, continuous type with 3/16-inch (minimum) hinge pin. Suitable safety steps and chromed grab handles shall be installed at door locations.
- B. Provide lightweight aluminum hang-on steps at side entrance/exit locations. Steps shall be equipped with adjustable neoprene feet and removable safety handrails for patient convenience.

7. WINDOWS:

Install Hehr, or equal, sliding safety-glass windows with insect screens within body sides. All windows shall be equipped with designer venetian blinds of appropriate color to complement interior décor.

8. ELECTRICAL SYSTEM:

Unit shall be wired to receive 4-wire, 120/240-volt, 60-Hertz, AC, single-phase, 60-amp power from generator or local power source via lead-in cable. Necessary wiring shall be provided for operation of 120/240-volt equipment where indicated.

9. WIRING:

- A. All trailer wiring shall be NEC standard conduit with stranded wire or plastic jacketed, non-metallic sheathed cable with ground. Wiring and related devices shall be installed in a workmanlike manner, mechanically and electrically secure. Items requiring periodic service shall be readily accessible and serviceable. Wiring shall be protected by grommets when passing through structural members.
- B. Circuit breakers panel(s) of adequate capacity shall be installed at appropriate locations within body and shall include:
 - 1. Individual 120-volt circuits for utility equipment, lights and receptacles.
 - 2. 240-volt for air conditioning and electric heating units.
- C. Duplex receptacles shall be provided in convenient locations within body interior to conform to National Electric Code.
- D. Provide 50-foot, 4-wire lead-in cable with waterproof receptacle on one end and alligator clips on other end for connection to 120/240-volt power source. Cable shall be sized to unit capacity.

10. LIGHTING:

- A. Fluorescent lights in standard 1-, 2-, or 4-tube fixtures shall be surface-mounted on interior body ceiling within plastic diffuser panels or beneath cabinets above work surfaces. Diffusers shall be equipped with latching device to prevent falling in transit.
- B. 12-volt dome lights shall be provided at each door entrance and within exterior body compartments.
- C. Install a floodlight on unit exterior at each door entrance. Floodlight shall be controlled by interior switch.

11. GENERATOR: (Gasoline)

- A. Install a 15 kilowatt Kohler, or equal, 120/240-volt, 60 Hertz, single phase, generator equipped with cooling device, remote controls, starting battery, and critical area silencer. Generator shall be installed for easy servicing, proper heat and exhaust dissipation, and connected to gas tank for fuel supply. Generator shall be equipped with one (1) 5-foot pigtail cable section with 60-amp waterproof receptacle for plugging into power inlet receptacle installed in front of unit. Generator shall be shock-mounted and housed in weatherproof cover.
- B. Generator shall be mounted on tread-plate steel platform on front of trailer tow bar. Entire generator shall be capable of being jacked off tow bar through use of four (4) manual jacks. This will eliminate transmission of vibration into surgical room.
- C. Install 50-gallon fuel tank under trailer skirt for fuel supply.

12. AIR CONDITIONING/HEATING:

- A. There shall be installed at the front of the mobile unit a Carrier, or equal, 230/208-volt, 60 Hertz, single phase air conditioning unit. Unit shall be shock-mounted, properly framed and connected to a metal duct installed between the roof and the ceiling. Duct shall be insulated and shall include adjustable air diffusers throughout body interior. Unit shall be thermostatically controlled. Condensate shall be dispensed via flexible tubing from air conditioner to ground. A rust-proof metal dust shield shall be provided in front of air conditioner intake, where applicable.

Cooling capacity: 27,200 BTU.

- B. Install a total of two (2) thermostatically controlled, electric blower heaters throughout body interior. Each heater rated at a minimum of 3,400 BTU.

13. PLUMBING:

- A. The plumbing system shall be designed to receive water directly from local sources or from the installed tank. Plumbing fixtures, devices and appurtenances shall be supplied with water in sufficient volume and at pressures adequate to enable them to function satisfactorily and without undue noise. All water piping shall be subjected to adequate water and pressure tests to determine leakage or loss in pressure.
- B. The plumbing system shall include:
 - 1. One (1) 40-gallon fresh water tank,
 - 2. One (1) 45-gallon wastewater tank with hose connection,
 - 3. One (1) Flojet, or equal, 120-volt heavy-duty water pump,
 - 4. One (1) 6-gallon electric water heater.
- C. The fresh water tank shall be installed within body interior for winter protection against freezing.
- D. Fresh water tank shall be connected to water heater and water faucet at sink by high pressure, polybutylene tubing.
- E. Plumbing system shall be equipped with check valves in accordance with approved commercial practice.
- F. Provide one (1) 50-foot water hose and one (1) wastewater hose. Hoses to be different sizes to prevent intermix.
- G. Install a dispenser for folding paper towels at each sink location.
- H. Waste water shall drain to waste tank or hose connection through corrosion-resistant PVC tubing.
- I. Unit shall be equipped with a water filter with replaceable filter element.

14. INTERIOR FURNISHINGS:

A. Surgery Room:

1. Accessible through swinging doors equipped with locking device on both sides. Aluminum, stainless steel, or chrome hand push plates shall be provided in the upper section of each swing door on both sides.
2. Install a UMF 5835, or equal, surgical/exam chair/table equipped with articulated headrest, drainage drawer, Bierhoff knee crutches, and cushion.
3. Build in stainless steel sink within formica surfaced work counter. Shall include hot and cold water mixing faucet energized by foot pedals.
4. Provide and secure a double-bowl stainless steel solution stand. Mounted on ball bearing conductive rubber casters.
5. Provide and secure a kick bucket with a 12-quart stainless steel pail encircled with a conductive rubber bumper. Mounted on ball bearing conductive rubber casters.
6. Provide and secure a Wilson, or equal, stainless steel crash cart. Includes three (3) full-width drawers, nylon rollers, full-width storage compartment at bottom and tubular steel push handle with donut-type rubber bumper. Includes stainless steel Mayo attachment, double-hook irrigator rod, adhesive rack, cardiac cardiac pressboard, oxygen tank holder, oxygen tank, regulator, humidifier, and masks.
7. Install a UMF, or equal, treatment cabinet with bottle rack installed.
8. Provide and secure a stainless steel Mayo stand.
9. Provide a floor- or wall-mounted, high-intensity surgical lamp.
10. Install on shelf above sink cabinets a Vernitron 8020 autoclave with capacity for three (3) instrument trays.
11. Provide and secure a portable anesthesia system, which includes: a 2-gas anesthesia machine with ventilator, GMS absorber, Halothane vaporizer, and gas scavenger. Ventilator includes oxygen, volume, and pressure monitor. Two (2) each “D” size oxygen and nitrous oxide cylinders shall be provided. (For use with non-flammable gases only. The surgical room is not explosion proof.)
12. Provide and secure a GOMCO, or equal, surgical aspirator (suction) with catheters, collection bottle, and stand.

14. INTERIOR FURNISHINGS: Continued

B. Toilet Area:

1. Shall be enclosed by floor-to-ceiling partition with access through hinged door with louver in lower section.
2. Install Thetford, Aqua-Magic, or equal, flush toilet with holding tank.
3. Install a stainless steel sink with hot and cold water faucet.
4. Provide toilet room accessories: to include: mirror, coat hooks, toilet paper holder, and paper towel holder.
5. Install a 120-volt power exhaust vent through exterior wall.

C. Dispensary/Laboratory Area:

1. Build in laboratory counter with storage above. Under counter install Jewett CT-1 blood bank refrigerator (less counter top). Unit equipped with TMS monitor system as well as dual automatic controls.
2. At desk provide castored, upholstered laboratory stool.
3. Provide and secure a first aid treatment chair for ENT, arm, and leg treatment. Includes side arms, basin, and cradle-type headrest.
4. At streetside build in floor-to-ceiling storage closet with adjustable shelves and pull-out drawers in lower section.

D. Recovery Area:

1. Install two (2) recovery beds with foam rubber upholstered pads.
2. Build in storage under pads.

15. MISCELLANEOUS:

- A. Four (4) removable, heavy-duty, swing-away stabilizing jacks shall be provided.
- B. Two (2) 2-½ pound dry chemical fire extinguishers shall be bracketed and installed within body interior.
- C. Underbody storage compartments shall be provided to store lead-in cable, etc. Accessible through hinged doors with holding devices and flush-mount chrome locks.
- D. Install coat hooks at convenient locations within body interior.
- E. Provision shall be made for securing all equipment during operational transit.
- F. Two (2) copies of Medical Coaches’ Operator’s Manual shall be provided. Shall include one (1) set of supporting manuals covering supplied items such as chassis, generator, air conditioner, etc., if supplied.
- G. Install an access port within the compartment or compartment door of every generator, electrical cable and plumbing compartment allowing the lead-in cable and hoses to be connected to the unit with the main compartment doors closed and locked.

16. BODY EQUIPMENT:

All vehicle lights, reflectors, markings and wiring systems shall be in conformance with D.O.T. Safety Regulations and State laws. The system shall be 12-volt. Lights shall not be mounted on rub rails or vehicle bumper. An illuminated rear license plate holder shall be furnished. Exterior lights shall be LED.

17. SPECIAL REQUIREMENTS:

- A. Details concerning colors, exterior painting, and lettering, etc., plus delivery of completed unit to be arranged at a later date in accordance with buyer’s wishes.
- B. Due to variances in State and Local regulations, there may be some additional options required for individual compliance. If compliance necessitates extra-cost options, they will be quoted separately as necessary.

18. LIMITED WARRANTY:

Medical Coaches Incorporated offers a limited warranty on the mobile unit for twelve (12) months or 12,000 miles. The warranty includes all equipment supplied by Medical Coaches except those items which are covered by a separate warranty.

A detailed warranty statement shall be provided upon purchase or upon request.

<u>OPTIONAL ITEMS :</u>	<u>CHECK IF DESIRED:</u>
A. Lettering exterior body at sides, front and rear to buyer’s order (Special artwork and emblems at extra cost.)	<input type="checkbox"/>
B. Paint body two-tone instead of standard one color	<input type="checkbox"/>
C. Spare tire, wheel and carrier. (Includes hydraulic jack and tire tool)	<input type="checkbox"/>
D. Unit to be wired for 50-Hertz service (Export Only):	
1. Generator to be de-rated to produce 220-volt, 50-Hertz, AC, 2-wire power. Includes grounding rod with chain. All electrical equipment within body to be equipped for 50-Hertz service	<input type="checkbox"/>
2. If any 110-volt equipment is to be installed, provide a 3,000-watt step-down transformer and connections to 110-volt receptacles	<input type="checkbox"/>
E. In order to permit the use of local power at specified locations, provide Russell & Stoll, or equal, reverse service, waterproof receptacle with cover and back box for installation in building	<input type="checkbox"/>
F. If above receptacle is provided, install matching 60-amp, reverse service waterproof connector on end of lead-in cable in place of alligator clips	<input type="checkbox"/>
G. Provide a 5-foot pigtail with connector on one end and alligator clips on the other end, for use in locations where no installed receptacle is available, if “F” above is provided	<input type="checkbox"/>
H. Public address equipment: Amplifier, microphone and one (1) exterior speaker .	<input type="checkbox"/>
I. 35-item tool kit contained in metal carrying case	<input type="checkbox"/>
J. 24-unit first aid kit with all necessary bandages, antiseptics and burn ointments contained in a steel box	<input type="checkbox"/>
K. Provide a variable-speed, heavy-duty oscillating fan	<input type="checkbox"/>
L. Provide one (1) folding aluminum table and two (2) steel folding chairs	<input type="checkbox"/>
M. Exterior Tent: To be a Eureka, Riverside, or equal, 9 feet x 12 feet with center height of 7 feet 6 inches, full floor, door and three (3) large windows with storm flaps. To be used for additional patient area or staff living area	<input type="checkbox"/>
N. Fisher Micromaster I, or equal, binocular microscope with carrying case	<input type="checkbox"/>
O. Army-style folding aluminum stretcher	<input type="checkbox"/>
P. Trauma Kit II, trauma/first aid kit, approximately 100 items. (List available upon request.)	<input type="checkbox"/>

Q. Min-X-Ray Unit, Model H-500, 100 kV/30 mA with 300MS stand