FEATURES AND BENEFITS

FOR AN

OSHKOSH SPECIALTY VEHICLES

MAGNETIC RESONANCE IMAGING SYSTEM

DESIGNED FOR EUROPE

Certified and approved mobile MRI units are designed and manufactured by the Oshkosh Specialty Vehicles in accordance with the site plan requirements of the medical equipment manufacturer selected by the customer. The following features apply:

I. CHASSIS

- Chassis: The foundation of every mobile MRI unit is a custom designed chassis consisting of two (2) 43.2 cm deep welded aluminum I-beams, with 20.3 cm outer "C" channels and 15.24 cm cross member “C” channels. All structural members are welded and gusseted together, yielding the strongest and most durable medical trailer chassis on the market.
- Axles: MRI trailers include two (2) heavy-duty 9,072 kg capacity axles.
- Hub-O-Meter: A Hub-O-Meter is installed on the right side fixed axle to allow the driver to maintain a record of the trailer movement.
- Air Ride Suspension System: The axles are installed on an automatic air ride suspension system. The proper ride height is set at the factory.

I. CHASSIS (Continued)

- **Air Ride Kingpin Bolster Plate:** A low profile air ride kingpin bolster plate is installed on the front of each chassis to provide air-cushioning support for the sensitive electronics installed in the mobile unit.
- **Mounting Plates:** Aluminum plates for the MRI system magnet and the electronics cabinets are welded in place, ensuring that critical components will be secure during transport.
- **Radial Tires:** Eight (8) premium quality radial tires are provided for durability and extended service life.
- **Steel Wheels:** The Radial tires are mounted on eight (8) grey painted steel rims.
- **Portable Support Stands:** Two (2) portable support stands are included to stabilize the rear of the Mobile unit at the site.
- **Landing Legs:** Two (2) electro-hydraulic landing legs with security stabilizing pins and fine tune adjustment are installed on the front of the trailer, to both offload the trailer from the tractor and to assure positive fixed height of the unit at the operating site. Landing leg controls are conveniently housed in an underbody compartment, shielding them from weather and road grime for reduced repair cost and extended operational life.

II. Structural

- **Body Structure and Framing:** Specifically designed and constructed aluminum body for MRI use, consisting of extruded aluminum tubes and channels welded into an incredibly strong framework, yielding a 253 cm overall width. This conservative approach yields an exceptionally strong, rigid super structure for the installation of magnetic shielding, doorframes, platform lift and exterior body panels.

II. Structural (Continued)

- Body Panels: The exterior skin of the trailer consists of commercially available aluminum panels that are mechanically fastened in place.
- Insulation: The walls, floors, ceiling, and underbody compartment are fully insulated with, sprayed in, expanding polyurethane foam. This produces an effective vapor and insulation barrier for heat, cold, and exterior noise.
- Vapor Barrier: A vapor barrier, installed along the full length of the trailer floor, prevents moisture and odors from emanating into the trailer.
- Underbody Compartments: The underbody storage compartment is manufactured of welded aluminum. It is insulated, heated and coated with a commercially available spray-on bed liner. This results in a coating that is easy to clean, reduces maintenance, increases sound attenuation, and provides an excellent appearance.

III. EXTERIOR

- Painted Surface: The entire trailer body is painted with DuPont™ Imron™ paint process that is certified and carries a limited 5-year warranty. This ensures the aluminum exterior panels; compartment and entry doors; air conditioner and generator are all the same shade.
- Platform Lift A high capacity, vertical movement platform lift with safety rails is installed on the curbside of the mobile unit. Patients prefer the OSV lift because of its smooth, straight up and down travel. The lift is stowed on the side of the mobile unit for transport, thus yielding additional underbody compartment space. Two (2) security storage pins are mounted on the lift gate cradle to lock the lift platform in place during transport from one location to the next. The leading edge of the lift is fitted with a high-density plastic scratch guard with rubber feet at the rear to prevent the paint from being chipped by stones at the site.

III. EXTERIOR (Continued)

❑ Lift Controls:	The platform lift can be controlled by either a flexible, handheld, low voltage, waterproof toggle switch assembly or switches located near the roll door. This allows the attendant, while on the platform lift, to effortlessly raise or lower the platform lift as required.
❑ Lift Canopy:	A canvas and aluminum rollout canopy is positioned above the patient roll door to help protect against bright sunlight, rain, snow, etc.
❑ Roll-Up Lift Door:	The insulated roll-up lift door permits easy access from the lift into the mobile unit control room. The door can be controlled from pushbutton switches located both in the control room and on the outside of the unit. For security purposes the door has an on/off switch located inside the unit.
❑ Roll Door Emergency Release:	A cable operated, roll door emergency release mechanism is installed above the roll door controls. When pulled the emergency release will disengage the roll door clutch motor allowing the roll door to be opened manually by the staff.
❑ Main Entry Door:	A high quality, all aluminum, insulated main entry door with door closer and window is installed on the right side of the trailer. The door is fitted with an adjustable privacy blind on the window. The exterior handle and deadbolt lock is located 228 cm. from the ground, allowing easy access to the lock without the entry stairs being deployed.
❑ Drip Rails:	Drip rails are installed over the main entry door, rear access door and the front emergency exit service door and also along the roofline on all sides of the mobile unit.
❑ Aluminum Stair Assembly:	An aluminum stair assembly with handrails and entry platform for staff entry into the control area is provided. The stairs include two (2) adjustable feet to assist with leveling the stairs at the site.

III. EXTERIOR (Continued)

❑ Footstep and Grab Handle, Rear Service Door:	Heavy-duty, flip down zinc die cast with bright chrome finish footsteps and grab handle are installed on the rear of the trailer to facilitate entry into the rear of the trailer (behind the magnet).
❑ Underbody Compartment Doors:	The underbody compartment doors are: o Gasketed to prevent moisture from entering o Insulated and Double sealed o Corrosion resistant aluminum o Lockable o Hinged at the top (Except fuel compartment which is side hinged.) o Opened with a gas assist cylinder
❑ Level Gauges:	Three (3) permanently mounted level gauges to assist with leveling the unit.
❑ Reflective Tape:	Red and White striped highly reflective tape is installed around the perimeter of the trailer for safety and increased nighttime visibility.
❑ Lockbox:	A weatherproof, steel combination lockbox is mounted on the front of the trailer to store keys.
❑ Exterior Graphics:	An allowance of EUR$1,023.50 is included in the price of the mobile unit for the provision and installation of custom vinyl graphics on the exterior of the mobile unit.
❑ Magnetic Shielding:	A proprietary and highly effective magnetic shielding system is installed on the two (2) sides and rear wall of the mobile unit. The magnetic shielding system is designed to meet or exceed the mobile MRI site plan requirements of the medical equipment manufacturer.
❑ RFI Shielding:	A lightweight, non-oxidizing, aluminum alloy RFI shielding system is designed and installed to meet the rigorous usage patterns of the mobile MRI unit. The RFI shielding system is tested by an independent testing laboratory to insure compliance with the site plan requirements of the medical equipment manufacturer.

IV. INTERIOR (Continued)

❑ RF Windows:	RF windows are installed in the partition wall and scan room door. This allows easy patient monitoring from either a standing position or a sitting position at the operator's console.
❑ Equipment Room Partition Wall:	The equipment room is separated from the control room by an insulated partition wall and a positive latched interior door.
❑ Solid Surface Countertops:	An ergonomically designed solid surface countertop is installed in the Control and Scan areas. This provides a tough wearing surface that will look great for years and adds a pleasant touch to the working environment.
❑ Ceilings:	The ceiling in the mobile unit is constructed with highly reflective, insulated acoustical tiles for reduced noise. To enhance the work area, a combination of lighting is installed throughout the mobile unit.
❑ Storage Cabinets:	Decorative laminated storage cabinets with adjustable shelves and positive cam latches are provided in the scan and control areas to accommodate customer needs and the storage of phantoms, coils, etc.
❑ Artwork:	One (1) decorative art print in a high quality frame is placed in the scan room to enhance the interior ambiance.
❑ Under Cabinet Lighting:	Under cabinet lighting, controlled by a dimmer switch, provides working light for the technicians work area.
❑ Crash Rail:	A color coordinating crash rail is provided on the walls of the scan room to help protect the wall from being damaged by a gurney.

IV. INTERIOR (Continued)

- Wall Coverings: The mobile unit incorporates extensive use of high quality hospital grade wall coverings. All materials have been selected for ease of cleaning and durability. Particular attention has been paid to the selection of color schemes to insure proper contrast and compatibility with the medical equipment.
- Floor Covering: An attractive high quality commercial grade, durable one-piece vinyl flooring is provided throughout the mobile unit. This single piece flooring is easy to keep clean, eliminating the build-up of dirt in seams.
- A/C Discharge Louvers: Ceiling mounted air-conditioning discharge louvers are configured to minimize downdrafts while providing the proper airflow to maintain specified ambient environmental conditions.
- Stereo System: A name brand AM/FM Stereo receiver and CD player is installed in one of the cabinets in the control room. High quality ceiling mounted speakers are installed in the control room ceiling providing a comfortable working atmosphere.
- I.V. Track: A ceiling mounted I.V. drip holder rail track is installed in the scan room.
- Backlit Film Illuminator: A backlit, film illuminator is mounted in the control room above the solid surface countertop.

V. ELECTRICAL & ENVIRONMENTAL SYSTEMS

- Main Electrical Disconnect Panel: The main 400V AC electrical incoming power disconnect panel is located in the left side underbody storage compartment.

V. ELECTRICAL & ENVIRONMENTAL SYSTEMS (Continued)

❑ Electrical Distribution Panel:	An electrical distribution panel is located in the equipment room. This panel provides the ability to isolate the certain sections of the unit for maintenance and service.
❑ Roll Door Interlock:	An interlock is provided so that when the lift is in the down position the roll door open door will not function until the lift is fully up.
❑ Roll Door On/off Switch:	An on/off security switch for the roll-up patient door is mounted on the interior wall near the entrance to enhance the security and safety of the mobile unit.
❑ Emergency Lighting Inside the Unit:	An automatic emergency lighting system is installed in the mobile unit to provide light, when the power supply is disconnected.
❑ Underbody Compartment Low Voltage Lighting System:	A manually operated, low voltage lighting system is located in the underbody compartment, providing light during set-up of the unit on a 30-minute timer, except for the fuel and cryogen compressor compartments.
❑ Lighting Controls:	Separate lighting system controls for the scan room and control area permit the operator to individually control the lighting in each area.
❑ Service Outlets:	One (1) GFCI 230V AC duplex service outlet is installed on each side of the underbody compartments.
❑ Cable Reel Service Light:	A cable reel service light is installed in the equipment room. This retractable light comes in handy for servicing the system cabinets

V. ELECTRICAL & ENVIRONMENTAL SYSTEMS (Continued)

❑ Time, Temperature and Humidity Level Indicator:	A wall-mounted time, temperature and humidity level indicator is installed in the control room and in the scan room.
❑ Main Entry Door Light:	An exterior surface mounted, weatherproof light fixture is mounted on the wall adjacent to the staff entry door and platform lift.
❑ DC power supplies:	One DC power supply is located in the underbody to maintain the 12V DC instruments/ systems. The other DC power supply consists of a 1.5 amp trickle charger mounted on the generator to charge the generator batteries.
❑ Air Filters:	Replaceable air filters are mounted in the air plenum in the Equipment Room of the mobile unit.
❑ Air Conditioning/ Heating Systems with chiller:	A custom designed, high performance air-conditioning system with an integrated cold head chiller gives you piece of mind with its electronic interface panel. This interface panel provides self-diagnostics, telephone interface and a computer interface to monitor performance and pinpoint service issues. The system provides close tolerance temperature levels to assure proper MRI system function as well as staff and patient comfort.
❑ Thermostats:	Fixed temperature, factory set, controls ensure the proper operating temperature ranges for the medical equipment and staff. This eliminates the operators from adjusting temperatures that could result in damage to the system electronics and reduced performance.
❑ HVAC Distribution:	Separate air supplies for the equipment and scan rooms ensure an adequate air supply to the temperature sensitive medical equipment.

V. ELECTRICAL & ENVIRONMENTAL SYSTEMS (Continued)

- **A/C Ductwork:** The air conditioning ductwork is lined with a sound absorbent material for reduced noise and operator and patient comfort.
- **Environmental Testing:** OSV mobile units are environmentally tested and certified for operation at temperatures ranging from –28.8°C to +43.3°C.
- **Generator:** A 60KW diesel generator, with engine block heater, is installed on the front of the mobile unit in a corrosion resistant cabinet to keep the generator out of the elements. The generator maintains the environmental control system, magnet shield cooler, and service equipment while the mobile unit is in transit or in set-up/take-down mode.
- **Cold Head Chiller System:** A custom designed cold head chiller system is integrated into the air conditioning system, freeing up additional storage space in the underbody compartment.
- **Fuel Tank:** A 265-liter fuel tank with level indicator is installed in a separate underbody compartment.
- **Humidifier:** Integrated with the HVAC system is a humidifier system which provides consistent humidity levels throughout the mobile unit. Maintaining humidity levels to the medical equipment manufacturer's specifications is critical to proper operation and reduced downtime.
- **Main Power Cable and Connector:** A flexible, five (5) core, 15.24 m long electrical power cable with a weather resistant Meltric DR250A #39-28017 connector with protective rubber collar is provided and stored in the underbody storage compartment. The cable can be deployed from either side of the underbody compartment.
- **Telephone and Data Connections:** Three (3) CAT5-E telephone and three (3) CAT5-E data connections are installed in the underbody compartment of the mobile unit.

V. ELECTRICAL & ENVIRONMENTAL SYSTEMS (Continued)

- Certification: The OSV trailer and installation of the medical equipment is “Certified” by the MRI system equipment manufacturer.
- Medical Equipment Installation: The MRI magnet, system components and cabling are all installed by experienced OSV installers.

VI. ADDITIONAL FEATURES and SERVICES

- Site Planning: OSV mobile unit Site Planning Guides are available upon request. This comprehensive guide provides essential dimensions and specifications to prepare your site pad, electrical connections and communications connections.
- Manuals: Every new mobile MRI unit comes with a set of Operator Maintenance and Service Manuals.
- Training Program: OSV offers a product orientation and training program for key personnel with the delivery of each mobile MRI unit. This four (4) hour training session is available at the manufacturing facility at the time of delivery. If you prefer to have the training at your facility, one of our Field Service Technicians can perform this for an additional charge.

VII. SAFETY FEATURES

- Common Floor Height: The patient entry, personnel entry and operating interior floor are all at the same height for safety.
- Entry Lighting: An exterior light fixture is installed near the entry door and patient for safety.
- Emergency Off: A medical system “Emergency Off” button is conveniently located near the operator’s console.

VII. SAFETY FEATURES (Continued)

- **Platform lift Pins:** Two safety, locking, pins are located near the lift cradle. These two pins, when properly installed, prevent the lift from coming loose and deploying during transit.

- **Roll Door Interlock:** An interlock is provided so that when the lift is in the down position the roll door open door will not function until the lift is fully up.

- **Emergency Lighting:** Exit signs and emergency lighting are placed in key areas of the mobile unit to help in an evacuation upon a power failure.

- **Electronic Braking System:** An approved electronic braking system is installed for increased safety.

- **Fire Detection System:** An automatic fire detection system is installed in the scan, control and equipment rooms. Contacts for connection to a remote fire alarm enunciator panel are provided in the underbody compartment.

- **Fire Extinguisher:** Two (2) hand-held ABC all-purpose, dry chemical non-ferrous fire extinguishers are provided. One is installed in control room, the other in the equipment room.

- **Warning Lights:** Warning lights are provided on the mobile unit to warn of the following conditions:

  - A warning light is located on the street side of the unit indicating 400V AC power is on.
  - Transport warning to indicate if items are not properly stowed, (e.g. Platform lift.)

VIII. CUSTOMER SERVICE and WARRANTY

- Customer Service Center: OSV operates a toll free Customer Service Hotline, 011-44-1276-64490, for all service, parts and warranty issues. The hotline is answered by a "human being," 24 hours a day, 7 days a week, 365 days a year.
- Warranty: A one (1) year warranty is standard on the mobile units. Extended service contracts are available.
- Parts: OSV carries a large inventory of replacement parts for the mobile unit.

  OSV offers on-line parts ordering via the web site.
- Field Service: Customer Service Support is provided by a combination of OSV Field Service Technicians, Original Equipment Manufacturers and authorized third-party service centers.

IX. OPTIONS

- Patient Sound: A Patient Sound system can be installed in the scan room prior to the delivery of the mobile unit.
- Sinks: OSV offers two sink options to satisfy either an operational or a state requirement. A stainless steel sink is available in either a fixed configuration or as a fully self-contained portable sink.
- Patient Gurney: A non-ferrous metal, padded patient gurney can be added to your order.
- Fire Suppression System: The entire interior of the mobile unit can be protected with a fire suppression system.
- Sound Attenuation Package: A special sound attenuation package is available for the Kohler 60 KW or the Kohler 100 KW generator system.

IX. OPTIONS (Continued)

- **Gas Connections:** Medical Gas and suction connections can be located in the scan room, allowing the use of facility gases and suction eliminating the need to carry tanks on the unit. Medical gas tanks can also be used if required. (Note: Tanks furnished by the Customer.)

- **Full Support Generator:** A Full-support generator is available (on some MRI models only)*, allowing patient scans powered from the generator, when shore power is not available. This is a convenience for those units operating in areas of the country where power grids are operating at their peak, during emergency situations, or during disaster recovery situations.

  *Check with OSV for which models this feature is available.

- **Marker Lights:** Extra marker and side turn signal lights are installed on the trailer body to assist the driver with maneuvering the trailer.

- **Intrusion Alarm:** An intrusion alarm system can be installed to monitor activity in the underbody compartments and in the operator's area.

- **Wall Murals:** A 122 cm H x 371cm W wall mural of mounted flat on the wall of the scan room. This high quality photographic print is mounted 3.2mm Centra with a luster laminate to protect the image from everyday wear and tear. OSV offers several images to choose from.

  Note: If the mural option is selected then the standard wall art is omitted.

- **Custom Exteriors:** OSV offers custom painted exteriors or bus wrapped exteriors which meets any specific brand campaign or conveying a specific marketing message out to the public. OSV offers paint and graphic scheme assistance.

X. SITE PLAN HIGHLIGHTS

❑ Tractor Specifications:	• Tractor weight of 7,711 kg or less • Air ride suspension • 208 cm swing clearance between kingpin and cab • 15,422 kg rear bogie rating • 5,443 kg front axle rating
❑ Site Pad Requirements:	• Recommended size 3.3 m x 13.8 m • Pad thickness based on local soil conditions • Pad levelness should be not less than .3.175mm per 3.048 m.
❑ Mobile Unit Specifications:	• Overall length: 13.8 m • Overall width: 2.54 m • Overall height: 4 m • Power requirements: 400 V AC, 3Ø fused at 125 amps • Personnel door width:0.8 m. • Platform lift Entry Width: 2.3 m.
❑ Water and Plumbing:	A water tank for the humidifier is located in the equipment room. The tank is fitted with a standard garden hose connection for convenience.
❑ Telephone and Data:	There are three (3) RJ11 phone and three (3) RJ45 data cable connections located in the underbody, near the main power cable. These are standard marine type, Hubbell connections. There are three (3) 15.25 m Hubbell cords supplied with the trailer.