

ICU AUTOMOTIVE IS ALWAYS WITH YOU



TOYOTA HIACE 4X4 AMBULANCE

www.infinitychassis.com

TOYOTA HIACE 4X4 AMBULANCE

REACH THE MOST DEMANDING AREAS

The brand-new Toyota Hiace 4x4 Ambulance is a truly dependable and off-road capable Advance Life Support ambulance to transport patients to and from the most difficult-to-access areas. This ambulance features uprated heavy-duty off-road suspension and two powertrain options that will reach places that other minibus-type ambulances will not be able to get to.





The ambulance compartment is distinctly separated into: 1. engine compartment 2. driver compartment and 3. patient compartment

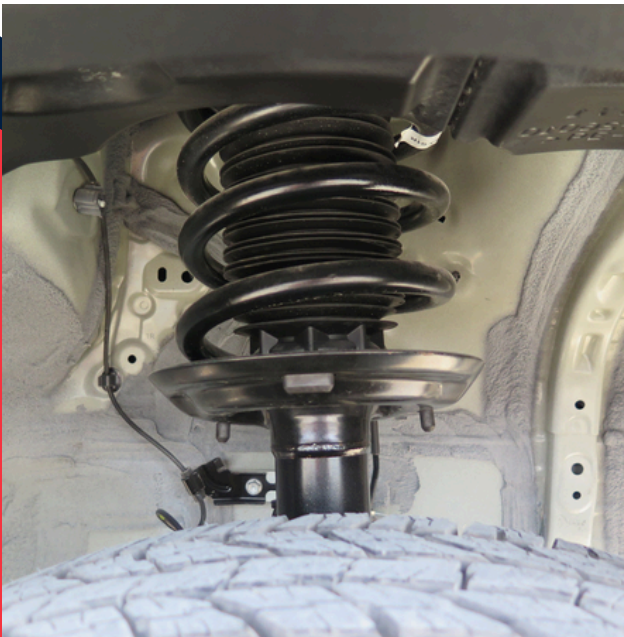
Cabinets, squad bench, stretcher platform, partitions, and rails are securely attached to metal tapping plates and/or framing welded to the body structure.



4X4 EDITION STANDARD FEATURES

- 1. Full-time 4WD system
- 2. High and Low range selector
- 3. Electronic transfer case (dashboard switch)
- 4. Electronic centre diff. lock
- 5. Independent front suspension with heavy-duty knuckles lower control arms and coil springs
- 6. Upgraded rear suspension with heavy-duty shock absorbers and leaf springs
- 7. Heavy-duty motor cradle

- 8. Upgraded 17" black steel wheels with all-terrain tires
- 9. Underbody protection
- 10. Wheel arch flares
- 11. Height increased from 2280mm to 2380mm
- 12. Increased ground clearance to 375mm
- 13. GVM increase to 4200kg
- 14. Full regulatory compliance with UAE regulations and international standards





PATIENT COMPARTMENT

Sub-structure, insulation, and reinforcement of patient's compartment

1. Patient's compartment is acoustically and thermally insulated from all sides and air-conditioned (cooling and heating). Insulation and acoustic treatment are applied.
2. The sound level in the patient compartment shall not exceed 70dB during the idle condition.
3. Appropriate insulation material and acoustic treatment are applied to minimize the sound level in the patient compartment.

Fitting & Equipment

- 1 x Patient Stretcher
- 1 x Squad bench seat
- Medical Storage and Oxygen Cylinders Storage Cabinets
- Oxygen Pipeline System
- Intravenous (IV) Holders
- Accessories
- Medical Seat

BULKHEAD WITH SLIDING WINDOW

A full-height partition wall with a suitable size rectangular sliding window (glass viewer) as a mechanism for privacy in the upper middle section is provided. The partition is secured on the sides, ceiling, and floor by welding or bolting to tapping plates. The partition wall is made of watertight Intecel/Integra sheet GRP-coated material in white colour.



THE CEILING, INTERIOR SIDE WALLS & THE DOORS



The ceiling, the interior side walls, and the doors of the patient's compartment are lined with powder-coated aluminium panels that are non-permeable and resistant to disinfectant. Padding is provided immediately above the entrance and partition apertures and other projection that presents a hazard to persons/ equipment moving about in the patient compartment.

MEDICAL STORAGE CABINET

Full-length Medical Storage Cabinet is fixed on the driver's side with an integrated control panel with having advanced electrical system and intercom. The Medical Storage Cabinet is in white colour with compartments having blue colour velcro straps with at least 2 in each compartment for holding items securely. The Medical storage cabinet is made of compact, light, rust-free, and fireproof CE- (Intecel-PVC-Excel) certified material. Control Panel must have an outlet plug socket 12V (2 pcs), switches for lights, an onboard suction unit, and connection to oxygen cylinders.

Power outlets: Three (3) 220/110V outlets (2 for inverter + 1 for shoreline) duly identifiable inside the medical cabinet. The electrical system is designed to turn 12V battery power into pure 220/110V AC and special wiring to operate medical equipment. All cabinet compartments have easy-to-clean surfaces (smooth interior and exterior), no sharp edges and corners, and ample storage for the first aid case, medical electrical equipment, and consumable supplies. The Medical Storage Cabinet has a storage slot for the spinal board and waste bin.

A small LED patient lamp 10 W, flexible type: 1 No (Map light) to be installed on the cabinet on the patient side.



MEDICAL STORAGE CABINET

01



Oxygen Cylinder Cabinet

A separate Oxygen Cylinder Cabinet with locking doors is installed next and adjacent to the entrance side doors from the inside. The Oxygen Cylinder cabinet will have a strap on the top for securing the emergency medical bag (red colour).

03



Medical Seat

One Fully Reclinable Swivel Medical Seat with seat belt for medical doctor/EMT. Single seat with swivelling mechanism, adjustable headrest, 3-point automatic safety belt and artificial leather upholstery.

02



Squad Bench

A Seat Tip-up Squad Bench with an under-seat storage area, three (3-point) automatic safety belts, and navy blue colour vinyl upholstery. The squad bench must have a seating area large enough for three seated attendants and fitted with two hydraulic/gas-pressured hinges. Tip-up squad bench must be made of Aluminum powder-coated material, must have separate backrest cushions, and be appropriately sized for comfort and emergency usage of the secondary stretcher.

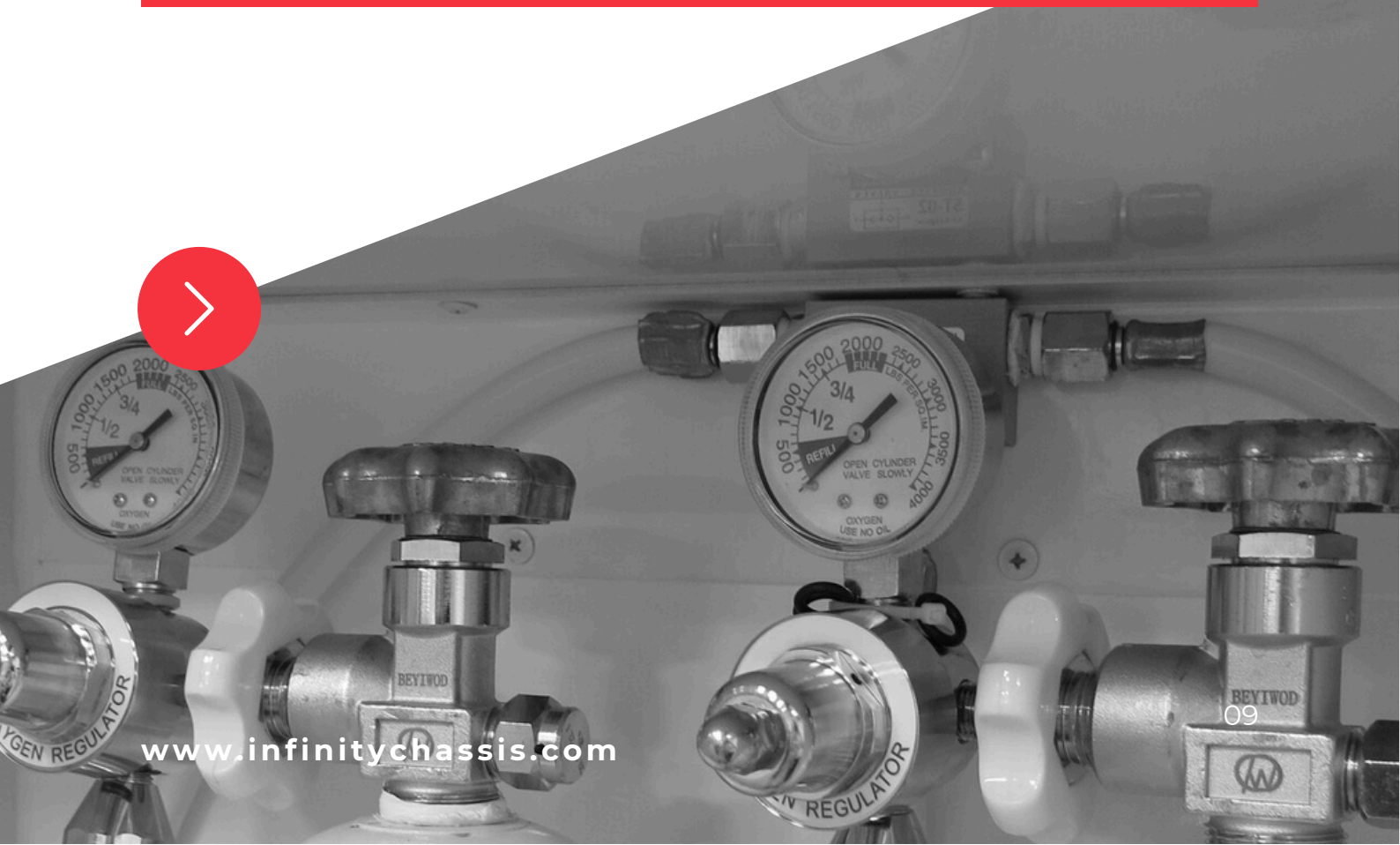


THE CENTRAL OXYGEN PIPELINE SYSTEM

Alloxygensystem components comply with international safety standards. The oxygen cylinders are fixed completely with robust mounting brackets inside the Oxygen Cylinder Cabinet. The oxygen cylinders are supplied by a reputable/recognized manufacturer (ISO certified 13485:2016 Medical devices) and meet all requirements for safety integrity in terms of pressure, material, and other compliance with international standards. The piping and installation of oxygen cylinders permit space and system isolation for maintenance purposes.

Medical gas piping is covered by the proper sleeve, and all ducts for gas installation or gas piping are vented. The above system is supplied with a Face mask providing oxygen at flow rates between 1 – 10 LPM and allowing for precise oxygen delivery by utilizing different-sized ports to change FiO₂ (24 – 50%). The face mask kit includes the tubing, humidity cup, and multiple jets, which are colour-coded and indicate the percentage of oxygen. Quantity - 10 sets for adults, and 10 sets for children.

The Central Oxygen Pipeline System with quick disconnect couplings: 1. 2 x Oxygen Outlets 2. 2 x Oxygen Regulators with Manometers 3. 2 x Humidifiers and 2 x Oxygen Flowmeters 4. 2 x F-size Oxygen Cylinders 5. 1 x D-size Oxygen Cylinder - Portable oxygen therapy inhaler kit with a regulator.



Flooring

Heavy-Duty Flooring made of the anti-slip medical vinyl sheet bonded on 12 mm (minimum) thick marine grade plywood with a shining grid (grey and blue color) with a crack protection bar at the edge. A raised vinyl portion is to be secured to avoid any fluid accumulation and provide easy maintenance.



Windows

Fully frosted windows on the rear and fully frosted on the left and right sides of the patient compartment with a high-quality opaque film.

Air Condition & ventilation

The ambulance is provided with a suitable air-conditioning system in the patient compartment. The system is able to maintain the interior temperature within a comfort zone and not exceedingly more than 24 °C when the vehicle is in idle condition and fully loaded. The system is of climate control system with an adequate cooling capacity to serve both driver's and patient's compartments simultaneously. The air conditioning system in the driver's and patient compartments must be controlled separately. The patient's compartment air-conditioning blower unit must be located on the bulkhead protected by the properly insulated and padded casing and with secure insulation for pipe connection. **Roof Type Ventilation Fan (Inlet/Outlet)** - well-designed ceiling-mounted one-way extractor which eliminates air and odours from the patient compartment and disposes them outside the ambulance. Nominal Voltage: 12V. It is waterproof, mushroom-type.

ELECTRICAL SYSTEM

Outlet

Control Panel in patient's cabin All exterior housings of lighting, switches, electronic devices, connectors, and fixtures are corrosion-resistant and weatherproof. All Electrical Outlets is fully tropicalized: a. 2 x power sockets of 12V supply from battery circuit to be provided within the Medical Cabinet. b. 3 x power sockets of 220/110V outlets (2 for inverter + 1 for shoreline) to be provided within the Medical Cabinet. c. All socket outlets is of multi- point/universal type covering the standards of the majority of countries worldwide. d. 4 x USB charging ports to be provided at driver compartment (2 pcs) and patient compartment (2 pcs).

Extra Battery

Additional heavy-duty battery with 50 A fuse with base, solenoid relay 80 A and special wiring (in addition to the vehicle battery) is installed complete with a charging status indicator for the usage of medical devices in the patient compartment. Heavy-duty battery as per manufacturer's recommendation.

A power inverter capacity of 2000W to support the medical equipment usage in the patient compartment is provided and is part of the electrical system.

Auto-Eject Shoreline with extension cables A robust and weatherproof connection point/outlet plug (220/110V) and heavy-duty charging cable with a 10 m length for the purpose of charging the battery externally is provided preferably on the driver's side.



INTERNAL AND EXTERNAL LIGHTINGS

Multi-flashing LED light bar system (in RED, BLUE, or a combination of RED/BLUE colours) is fixed on the roof in the front. The external lighting system consists of the siren, amplifier with speaker, microphone, and volume regulator. The LED light bar system with PA system is made by Whelen, U.S.A. and comprises of following:


1. The long-range optical signal
2. The loud acoustic signal
3. The control system
4. The amplifier and speaker(s) system

The control unit includes but is not limited to the following functions:

1. ON/OFF switch
2. Acoustic warning signal
3. Volume control
4. Loudspeaker checking function
5. Signal and siren selector
6. PA function
7. Relevant light indicator
8. Minimum selection of "Radio," "PA," "Manual," "Yelp," "Wail," and "Hi-Lo", Man, Horn, and a magnetic noise cancelling microphone.

EMERGENCY WARNING LIGHTS

- a. 6x emergency LED warning lights (3 on the LH side and 3 on the RH side) must be fitted on each side of the ambulance roof (RED, BLUE, or a combination of RED/BLUE) and the additional 2 x rear warning LED lights. The warning lights are recessed type at the corners of the ambulance.
- b. 2 x LED-type front grill emergency warning lights are to be installed inside the front grille of the ambulance.
- c. 1 x outside working light with handle is installed at the rear end roof outside. The wattage capacity of the light shall not be less than 50W.



Interior Lighting - the patient compartment headliner is provided with 4 x LED-type lights. Natural colour balance lighting or daylight lighting is provided with guarantees of no flickering/blinking problems on the lighting system. Lighting over the stretcher is at least 95% of the surface area. Lighting intensity shall not be less than 500 lux.

ACCESSORIES

I.V. Hooks

2x heavy-duty double fold-down anti-sway I.V. hooks with Velcro straps attached to the ceiling, one IV Hook holds 2 bags of IV Fluids. The blood and Intravenous bottle holder is placed on a movable locking-type track made of aluminium located parallel to the Medical Cabinet. Hooks are capable of securing IV bags of 500ml and 1000ml and preventing them from moving when the vehicle is in motion.

Stretcher Platform

The stretcher platform is firmly installed on the floor under the main stretcher with bottom space for spinal board storage, the flap or ramp that can be turned up and down by a tension spring that is designed for convenient loading/unloading of the stretcher.

The Grab Railing System

is of corrosion-resistant material and has padded or curved up ends and rounded corners. 1 x Full-length grab rail with a load-bearing capacity of 150 kg, fixed to the ceiling and parallel to the Medical Cabinet allowing easy access to an attendant. 2 x Grab bars with load bearing capacity of 150 kg fixed on the Medical Cabinet and vehicle body adjacent to rear right door entry.

Reverse Alarm

The alarm must be located on the vehicle undercarriage and is activated when the vehicle is placed in reverse gear.

2 x Fire Extinguishers (2kg)**Emergency Hammer with Seat Belt Cutter****Medical Waste Bin**

Rear Step made of aluminum fabricated and fixed on the rear entrance.

Side Step (Electric) made of aluminum, retractable, and fixed on the side entrance.



EQUIPMENT

Sign writings

Sign writings and markings red coloured vinyl reflective film sticker of AMBULANCE is pasted in reverse on the front bonnet and on the rear door of the vehicle. Red- coloured vinyl reflective film stripes with a width of 10 cm are applied on the side panels and rear of the vehicle.

Equipment & fitting

- a. All internal fittings/fixtures are fastened with a rust-resistant fastener in a manner that shall preclude loosening and prevent separation in an accident.
- b. All openings between the chassis-body and occupant-carrying compartments are sealed to prevent intrusion of water, dust, and exhaust gases.
- c. Exposed edges that could come into contact with the occupant's hands, legs, head, etc., during normal use are terminated in rounded edges.
- d. All mounted medical/non-medical equipment, fittings and other installations in the vehicle are adequately padded/fix to prevent noise during travelling.



Medical equipment



Spencer Carrera XL Tec Max 10G (Made in Italy)

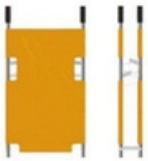
Main Self-Loading Stretcher with Anterior and Posterior fastener. Compact and lightweight self-loading stretcher for the transport of patients for rescue operations on the road and sanitary vehicles. The legs are folding independently operating the specific commands and opening automatically when unloading. The stretcher comes with a flame retardant mattress that is easy to clean having 10 cm thickness in black colour with 3 support belts for quick fixing.

The stretcher model meets the following specifications: Length: 1980 mm Width: 585 mm Weight: 37 kg Loading capacity: 250 kg Wheels: ø200 mm Height of the loading carriage wheel: 75 cm. Frame material: Stainless steel. Polyethene board - easy to clean. Sidebars length: 680 mm Sidebars height: 200 mm IV Holders supplied and attached to the stretcher, foldable type.

Medical equipment



Lift-up type Self-folding stretcher loading ramp fixed on the rear side.



Heavy-duty foldable emergency stretcher with ground supports for patient recovery and transfer to a main stretcher or other means of transport. It is provided in a carrying bag with a load-bearing capacity of 170 kg. The stretcher model meets the following specifications:

Length: 2010 mm
Length folded: 1000 mm



Width: 480 mm
Ground clearance: 140mm
Weight: 5.5 kg
Loading capacity: 170kg
Thickness folded: 170mm
Material: Stainless steel, aluminium and PVC.
Supplied with restraint belts.

Medical equipment



Spencer B-Bak Pin 180kg capacity (Made in Italy)

Spinal (back) board with straps, rapid unhooking buckle, and head immobilizer. It is of high quality, made of lightweight construction, that is X-Ray translucent. It could be used for water rescue with a slick surface for easy transfer. Resistant to fluids, chemicals, and high/low temperatures. Dimensions: Length 1840 mm x Width 405 mm x Thickness 45 mm. The Yellow Colour. Weight: 6 kg. Patient Load: 180kg.



Spencer Head Immobilizer (Made in Italy): Is either attached or removed from the backboard. Two waterproof plastic-coated closed-cell foam head supports. Durable head straps with large ear holes for monitoring the patient's ear canal. Minimal interference with X-Ray, MRI, or CT scanning procedure.



Spencer Viso Bumper (Made in Italy)

Wall-mounted Aneroid Sphygmomanometer made of unbreakable material, shockproof thermoplastic rubber resistant. Cuffs for both adults and children. Gauge graduated 0 - 300mmHg (min) in 2 (max) mmHg increments, with pressure release valve.

Medical equipment



Spencer NEC UP (Made in Italy)
Cervical Collar Set for both adults and children (3 each size) with a carrier bag.



Built-in Suction Unit, Rechargeable AC/DC (with Wall Bracket, Suction Pump, Suction Gauge, and Suction Jar). The user-adjustable suction ranges between 0 and at least 525 mmHg (70 kPa). The flow rate at maximum vacuum is ≥ 33 L/m ($2 \text{ m}^3/\text{h}$). The unit is provided with a suction tube of at least 1.5 meters. (Made in Italy/Austria)