

CHASSIS SPECIFICATION

Engine

Cummins ISL9 8.9L six cylinder turbocharged and intercooled diesel engine certified to latest EPA emission standards.

The emissions package includes Exhaust Gas Recirculation (EGR), Variable Geometry Turbo (VGT), Diesel Particulate Filter (DPF) and Selective Catalytic Reduction (SCR).

Displacement: 8.9 liters.

Power: 380 PS (283 kW) @ 1900 rpm. Torque: 1250 lbf-ft (1696 Nm)

@ 1400 rpm. (Option Power: 330 PS (240 kW) @2000rpm.

Torque: 1100 lbf-ft (1493 Nm) @ 1300rpm).

Gearbox

Allison B500R automatic transmission with integral retarder, interlocks and the latest fuel saving features and technologies.

Option of Voith D854.6 four speed or ZF 6AP1700B six speed automatic gearbox, both fitted with integral retarders and interlocks and fuel saving technologies.

Front Axle

ZF RL75A deep drop beam axle.

Capacity: 16538 lbs (7500 kg).

Lock angle 47° with steering tag axle.

Drive Axle

ZF AV-133 drop centre axle.

Rear axle drive ratio selected from the following ratios to match operator performance criteria: 6.2:1, 5.74:1, 5.12:1, 4.53:1.

Capacity 26460 lbs (12000 kg).

Tag (Rear) Axle

ZF RL75A deep drop beam axle.

Capacity: 16538 lbs (7500 kg).

Lock angle 10° with steering tag axle.

Suspension

Full air suspension mounted within chassis frame floor contours eliminating component intrusion into passenger saloon areas.

Front: Two 12" (305mm) air springs. Multilink location. Anti-roll bar and two double-acting dampers.

Drive: Four 10" (255mm) air springs. Multilink location. Anti-roll bar and four double-acting dampers.

Tag: Two 11" (275mm) air springs. Trailing taper leaf springs. Panhard Rod and two double acting dampers.

Features: Mechanical levelling control system with fast-knee facility on front suspension reducing height by 31/5" (80mm).

Steering Gear

ZF 8098 integrally powered, variable ratio steering gear.

18" (457mm) two spoke steering wheel. (Option 4 spoke coach style)

both with centre horn push.

Telescopic steering column and binnacle interlocked with the handbrake for safety.

ZF RAS steering system for tag axle rear steer.

Frame

All welded steel channel and box sections complete with full body integration. Chassis frame has full corrosion protection with 2 pack epoxy coating, and wax oil cavity injection.

Braking System

Electronic Braking System (EBS).

Full air operated category 1 ABS 17" (430mm) disc brakes with separate systems for front, drive and tag axle.

Park brake is air-released, spring-actuated on drive wheels.

Hand control valve.

Fitted with Wabco 500 air compressor and Bendix AD9 air dryer.

Wheels and Tires

Tires: 305/70R22.5 Michelin X InCity Z tubeless radial.

Wheels: 8.255" x 22.5" steel spigot mounted.

Option of Alcoa Dura-Flange, or Dura-Brite wheels.

Cooling System

Nearside rear mounted electric fan cooled radiator with separate offside rear mounted electric fan cooled CAC. Fan speeds dependent on engine cooling performance. Reverse test switch for testing and cleaning radiators installed in engine compartment.

Separate coolant header tank with sight glass and nearside fill point.

Flyscreen fitted in front of radiator on access door to minimize dirt ingress and to allow speedy cleaning.

Fuel tank

Aluminum fuel tank with a usable capacity of 119 US gallons (450 liters) mounted on nearside rear with DEF tank 71/8 US gallons (27 liters) usable capacity adjacent to fuel tank.

Electrical Equipment

24 volt, single pole negative earth.

2 x 12 volt heavy duty maintenance-free batteries with 225 Amp/hour capacity. Mounted on slide-out carrier at rear offside adjacent to engine compartment.

Battery boost socket supplied.

Integrated intelligent battery guard.

1 x 500 Amp and 1 x 275 Amp Niehoff alternators.

Fast fuse and overvoltage protection.

Continental VDO Kibes multiplex system.

ENVIRO⁵⁰⁰

42' (12.9m) Low Height Double Deck
Transit or Commuter Bus
(North America)

Instrumentation

Stylish instrument and control binnacle with all instruments clearly visible.

Color TFT screen displaying running data and intuitive

On-board diagnostics.

Options

- Electronic water header tank level indicator.

- Hubodometer.

- Ferry lift.

- Spare wheel and tire.

- Posilock fuel fill systems.

- Posilock DEF fill system.

- Alloy wheels.

- Engine oil management system.

- Service (Femco) drain valves.

BODY SPECIFICATION

Legislation

The Enviro500 transit and commuter double deck vehicles are designed to meet the legislative requirements of current 'Federal Motor Vehicle Safety Standards' (FMVSS) including 'Americans with Disabilities Act 2010' (ADA) and 'Canadian Motor Vehicle Safety Standards' (CMVSS) including CAN/CSA-D435-02 (R2012) for 'Accessible Transit Buses'. Our transit and commuter double deck vehicles are also designed to meet American State and Canadian Provincial legislation where applicable.

Structure

The low weight body structure consists primarily of aluminum extrusions and shear panels with the addition of stainless steel in areas of higher stress ensuring a high body stiffness and durability whilst minimizing the vehicle mass. All of the structural members are mechanically joined ensuring ease of repair following any form of collision damage.

The top deck roof and interdeck consist of single piece composite panels significantly increasing the body stiffness with a reduction in weight compared to conventional construction. The top deck roof composite has high thermal insulation properties helping to prevent condensation.

The body is rigidly fixed to a fully integrated steel chassis frame optimized for low weight and high strength.

Any risk of electrolytic corrosion between dissimilar metals is removed by the application of dielectric paint. The steel frame is treated with a wax injection technology prior to undersealing the completed vehicle.

Exterior Panels

Exterior aluminum side panels are flush fitting with the glazing units giving a very clean, aesthetically pleasing appearance. Care has been taken to avoid protrusions including hinges and fixing heads to prevent build up of road dirt and to make cleaning easier. Panels in higher risk of damage from curbs including side skirts and lower corner moldings are quickly and easily replaced. Corner moldings are separate from the upper panels isolating potential damage and minimizing replacement costs.

Glazing

Main body glazing is 'direct bonded' single glazed, flat toughened safety glass, tinted to reduce Solar, Light and UV transmittance with the option for full Dual Pane 'direct bonded' glazing.

Front upper saloon and lower saloon windscreens are gasket glazed for ease of replacement.

All glazing including emergency opening units comply with FMVSS 205.

Doors

The entrance is fitted with a twin leaf inward swing glider door with active seals for improved sealing performance.

The exit door is fitted with a twin leaf sliding plug door providing a clear exit platform.

Pneumatic doors are fitted as standard. Fully Electric doors offered as an option.

Glazed Single and Dual Pane 'quick release' panels are offered.

Interior trim

The interior comprises of wipe-clean laminates for ease of cleaning.

Optional: Soft trim.

Driver's Cab

A spacious, comfortable, quiet and ergonomically designed driver's cab giving excellent forward vision, enhanced by the use of a curved windscreen, is provided. The fully adjustable steering wheel ensures ease of reach to the operating switches.

Flooring

All products offer low entry as standard with a floor constructed from rot and fire retarded 5/8" (15mm) Finnish Birch Plywood and covered with a hard wearing fully weldable PVC floor system available in a wide range of colors and designs to suit the operator's requirements. The joints between vertical panels and the floor are radiused making cleaning much easier.

Heating and Ventilation

Thermo King air conditioning system to upper and lower decks. TK Model TDD-M1 Southern (warm climate) specification cooling with R407c refrigerant.

TK Model TDD-M2 Northern (cold climate) specification cooling with R134a refrigerant.

TK Model TDD-M4 can be offered as an option for operators who can use only R407c refrigerant but require a Northern (cold climate) specification.

Floor level blown "warm air" heating system to upper and lower decks. (Northern cold climate spec.).

Driver's area with separate combined warm air demisting/heating and cooling system.

Electrical System

The 24 volt electrical system is fully multiplexed, with hardware located in easy-to-access locations. The system provides intuitive On-board diagnostics via the driver's screen.

Dedicated expansion locations and interfaces are provided for additional customer equipment.

The chassis system wiring is integrated and routed through the body, to improve reliability and accessibility.

Bulkhead connections and modular wiring improve troubleshooting and ease of repair.

Driver's courtesy lighting provides well lit entry and exit. Continuous saloon lighting is provided by stylish LED strips as standard.

LED lights are standard throughout the vehicle with the exception of the headlamps.

The choice of both 24v and 12v exterior lighting systems are offered. Optional: Lighting check switch to ease driver's vehicle inspection.

Destination Gear

Front, side & rear electronic LED destinations are offered as standard on all vehicles.

Streetside destination and front 'Run number' signs offered as options.

ENVIRO⁵⁰⁰

42' (12.9m) Low Height Double Deck
Transit or Commuter Bus
(North America)

Ramps

Powered ramp offered as standard. (Ricon SSR-1, 1:6 incline ramp).

Seating

The body framing allows for a choice of transit or high back reclining seating in various configurations.

Up to 57 fixed 'transit type' seats in upper saloon.

Up to 31 fixed type seats in lower saloon including the three 'flip-up' seats in both wheelchair compartments.

Wheelchair provision

Two ADA compliant wheelchair positions.

Energy Absorbing Front and Rear Bumpers

Optional energy absorbing bumpers can be fitted at front and rear of vehicle.

Bike Rack

2 or 3 Bicycle 'Bike Rack' stowage offered as options at front of vehicle.

Tree Guards

Tree guards fitted to front corners of upper deck.

DIMENSIONS

| | |
|----------------|--|
| Overall length | 42' 5 1/8" (12931mm) |
| Overall height | 13' 6" (4115mm) |
| Overall width | 8' 3" (2520mm) |
| Wheelbase | 21' 1" + 4' 11" 6430mm (Inner) 1,500mm (Outer) (Drive and tag axle centers) |
| Front overhang | 8' 1" (2478mm) |
| Rear overhang | 8' 3" (2523mm) |

WEIGHT DATA

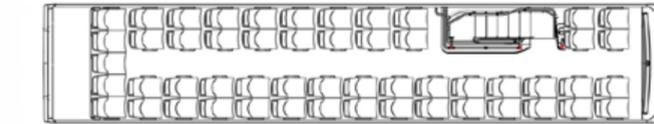
| | |
|--------------------------|---------------------|
| Front axle plated weight | 15652 lbs (7100kg) |
| Drive axle plated weight | 25352 lbs (11500kg) |
| Tag axle plated weight | 15652 lbs (7100kg) |
| GVWR | 56659 lbs (25700kg) |



SEATING CONFIGURATIONS

42' 5" (12.9m) Two Door

Upper Saloon



53 ♿ (Maximum Fully Reclining Seating)

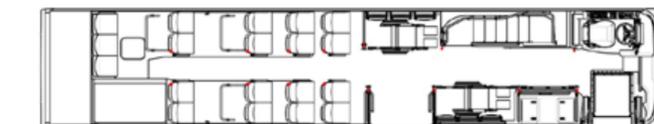


57 ♿ (Maximum Fixed Seating)

Lower Saloon



31 ♿ or 28 ♿ + ♿ or 25 ♿ + ♿ + ♿



25 ♿ or 22 ♿ + ♿ or 19 ♿ + ♿ + ♿

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ENVIRO⁵⁰⁰ **Specification**
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Go-Anywhere



The new 13' 6" (4.1m) Go-Anywhere high capacity design can operate virtually anywhere in the USA or Canada.

Capacity



The ideal solution for carrying large numbers of passengers while occupying a smaller road space (around 100 passengers in a 42' model).

Space & comfort



More space than previous designs, quiet and with superb ride comfort.

Wide staircase



Easy to use, wide and well-lit staircase.

Cost efficient



Lowest fuel consumption per passenger carried.

Reliability



Reliable and proven engineering solutions incorporating acknowledged class-leading components.

Passenger's favorite



Popular with passengers thanks to panoramic views from the top deck.

Accessible



Low step and flat floor allows full access for wheelchairs.

Flexibility



Available as an urban transit or commuter bus.

Maintenance



Easy and low cost maintenance

More revenue



More space for revenue generating advertisements.

Maneuverability



Simple to maneuver.



Stylish, lighter, more fuel efficient and with 80-86 seats, the Enviro500 has a stunning new look and overall height of just 13' 6" (4.1m).

The Go-Anywhere Enviro500 is a double deck that can operate on the same routes as single decks in virtually every part of the USA and Canada.

It offers a unique combination of high capacity and comfort, ushering in a new era for urban transit or inter-urban commuter operations.

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Alexander Dennis' policy is one of continuous development. The right is reserved to change specifications of the models and items described. For the latest details always consult Alexander Dennis.

