

Specification



The all-new Enviro400 is a bus that raises the bar for the industry and is an inspired successor to Britain's best-selling double deck.

Enviro400 has been meticulously thought-out and built as part of a unique partnership involving ADL's world-leading design and engineering teams, customers from all walks of the industry and suppliers with unique, specialist skills.

This visionary, collective approach has resulted in a bus designed by the industry... for the industry.



ENVIRO400
Low Floor Double Deck (Euro6)
10.3 m · 11.5 m

CHASSIS SPECIFICATION

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Engine

Cummins ISB6.7 six cylinder turbocharged and intercooled diesel engine certified to Euro6 emission standards.

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

Displacement: 6.7 litres.

Power: 250 PS (187 kW) @ 2100 rpm.

Torque: 1000 Nm @ 1200-1600 rpm.

Gearbox

Choice of Voith D854.6 W53 4 speed or ZF 6HP1203B six-speed automatic gearbox both fitted with integral retarders and interlocks.

Front Axle

ZF RL75 deep drop beam axle.

Capacity 7500 kg.

Lock angle 55°.

Rear Axle

ZF AV-132 drop centre axle.

Capacity 13000 kg.

Suspension

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

Front: Two 305 mm (12") air springs. Multilink location.

Anti-roll bar and two double-acting dampers.

Rear: Four 255 mm (10") air springs. Multilink location.

Anti-roll bar and four double-acting dampers.

Features: Electronic Levelling Control (ELC) and fast-kneel facility on front suspension reducing height from 325 mm to 245 mm.

Steering Gear

ZF 8098 integrally powered, variable ratio steering gear.

457 mm two-spoke steering wheel.

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

Frame

Lightweight frame

Bolted modular platform.

Steel channel, rectangle and angle sections.

Frame Section is 120 mm x 80 mm x 8 mm thick.

Finished with a two-pack epoxy compliant corrosion-resistant paint.

Braking System

Electronic Braking System (EBS)

Full air operated category 1 ABS 430 mm disc brakes with separate systems front and rear.

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

Hand control valve.

Fitted with Knorr Bremse 630 air compressor and Air Processing Unit (APU).

Wheels and Tyres

Tyres: 275/70R22.5 X Incity XZU tubeless radial

Wheels: 7.5" x 22.5" steel spigot mounted.

Cooling System

Rear mounted offside side-by-side cooling pack incorporating intercooler with electronically controlled hydraulic fan drive.

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

Flyscreen is fitted in front of radiator to minimise dirt ingress.

Fuel tank

Aluminium fuel tank with a capacity of 275 litres with an option to 'choke' the capacity to 200 litres.

30 litre AdBlue tank mounted rear of the rear axle.

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 under driver's cab.

Battery boost socket supplied.

Integrated intelligent battery guard.

2 x 120 amp alternators.

Fast fuse and overvoltage protection.

Continental VDO Kibes multiplex system.

Instrumentation

Stylish instrument and control binnacle with all instruments clearly visible, incorporating ISO 16121 features and dimensions.

Colour TFT screen displaying running data and intuitive

On-Board Diagnostics.

All electrical controls mounted forward of the driver for easy reach.

Positive action, tactile rocker switches with LED illumination.

Exterior lighting check function.

Options

- Electronic water header tank level indicator
- Ramp interlock
- Tachograph
- Driver's cab air-conditioning/ saloon chilled air system
- Hubodometer
- Full vehicle squat
- Pressure release radiator cap
- Ferry lift
- Spare wheel and tyre
- Identic and Posilock fuel fill systems
- Identic AdBlue fill system
- Radiator filter
- Cooling pack induction filter
- Alloy wheels
- Engine oil management system
- Service (Femco) drain valves
- Separate start batteries
- Maintenance free gel batteries
- Monbat AGM low maintenance batteries

BODY SPECIFICATION

Legislation

Our vehicles are designed and Type Approved as compliant with all relevant European Community legislation for the UK and Europe, with other country specific legislation available on request.

Structure

The low weight body structure consists primarily of aluminium extrusions and shear panels with the addition of stainless steel in areas of higher stress ensuring a high body stiffness and durability whilst minimising 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 optimised 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 aluminium 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 kerbs including side skirts and lower corner mouldings are quickly and easily replaced. Corner mouldings are separate from the upper panels isolating potential damage and minimising replacement costs.

Glazing

The vehicle has ADL's patented Quick Release Glazing (QRG) system. This new system has a much improved aesthetic appearance both inside and out, whilst being quicker to replace than a gasket glazed vehicle. The system has a unique sealing system reducing water ingress without the need to apply messy sealants. The glass can be replaced by one man from inside the bus thus removing the need to work at height from platforms. Front and rear glazing is bonded.

Doors

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

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

Pneumatic doors are fitted as standard.

Interior trim

The interior comprises of wipe-clean laminates for ease of cleaning which can be tailored and coloured to the operator's requirements and to match floor and seat colour schemes.

Drivers Cab

A spacious, comfortable, quiet and ergonomically designed drivers cab giving excellent forward vision enhanced by the use of a curved windscreen is provided. The fully adjustable steering wheel and instrument binnacle ensures ease of reach to the operating switches. The integrated assault screen available with both fixed and drop down screens in the door provides superb driver protection.

Flooring

All products offer low entry as standard with a floor constructed from treated 12 mm birch plywood and covered with a hard wearing floor system available in a wide range of colours 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

The standard vehicle is supplied with a blown-air heating system to the saloons with forced air ventilation from the front dash. The vehicle structure is insulated with fire retardant sheet insulation. The system is fitted with brushless motors, powered extract and automatic temperature control.

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, including a Bus-FMS standard gateway. 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.

Cleaning light switch provides timer controlled interior lighting. Driver's courtesy lighting provides well lit entry and exit.

Service indicator can identify vehicles in busy garages requiring attention.

Lighting check switch eases driver's vehicle inspection.

Continuous saloon lighting is provided by stylish LED strips as standard.

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

Destination Gear

Electronic LED destinations are offered as standard on all vehicles. Rear LED illuminated blinds are also available.

Ramps

Both manual and powered ramps are available.

Seating

Seating is available from a wide range of manufacturers with standard offerings such as:

- Civic V2
- Civic V3
- Pratico Low Back
- Pratico High Back
- Transito

Options

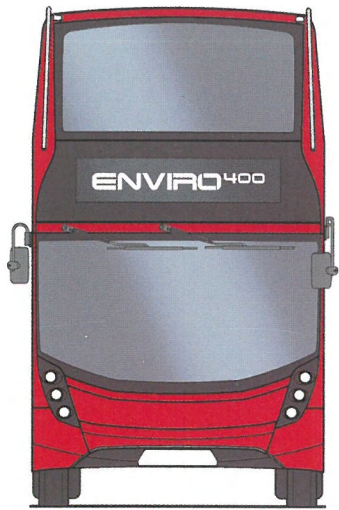
- Driver's cab air conditioning
- Upper saloon air chill
- Wireless bell pushes
- Ambient sensed internal and external lighting
- Front door sensitive edge
- Electric powered ramp
- Electric doors
- Coloured LED destinations
- Coloured LED saloon lighting
- CCTV
- RTPI
- WiFi
- Underseat lighting
- Upper saloon tables
- Telematics
- Passenger counting
- LED dipped beam
- 240 volt sockets

DIMENSIONS

Model	Overall length	Wheelbase	Front overhang	Rear overhang	Overall height
10.3 m 1 & 2 door	10345 mm	5250 mm	2650 mm	2445 mm	4300 mm
10.9 m 1 door	10895 mm	5800 mm	2650 mm	2445 mm	4200 mm or 4300 mm
11.5 m 1 door	11495 mm	6400 mm	2650 mm	2445 mm	4300 mm

WEIGHT DATA

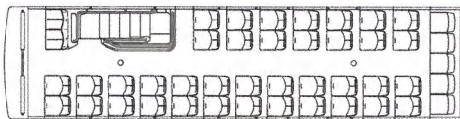
Model	10.3 m to 11.5 m
Front axle plated weight	7500 kg
Rear axle plated weight	11500 kg
Gross plated weight	17800 kg
Design gross weight	18000 kg



SEATING CONFIGURATIONS

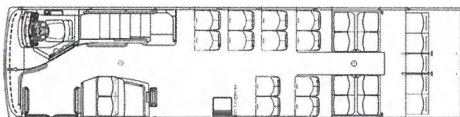
10.3 m Single Door

Upper Saloon



45 

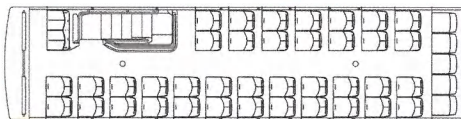
Lower Saloon



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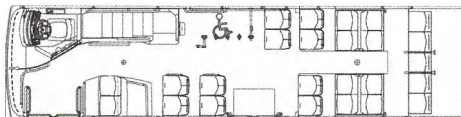
10.3 m Two Door

Upper Saloon



45 

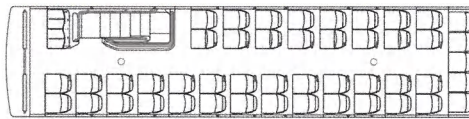
Lower Saloon



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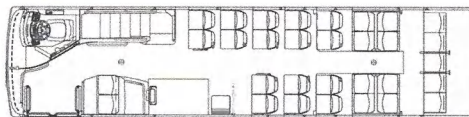
10.9 m Single Door

Upper Saloon



49 

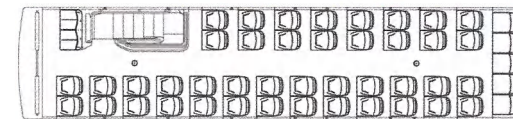
Lower Saloon



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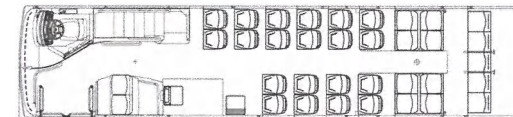
11.5 m Single Door

Upper Saloon



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Lower Saloon



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ENVIRO400

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Styling



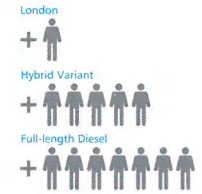
Modern curved shape flowing from front to back, descending to distinctive "hips" at the rear.

Reduced Weight



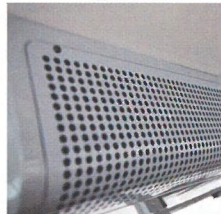
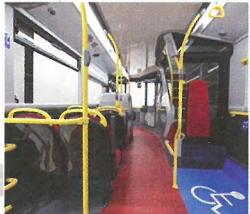
Enviro400 is 400 kilograms lighter, improving fuel economy and increasing seating capacity.

More Seats



Ingenious design has resulted in more seating on a London bus, five more seats on a hybrid, and up to seven extra on a full-length diesel.

Heating & Ventilation



Radical new heating and ventilation system maintains a constant temperature throughout the bus and when combined with a chiller unit can contain heat at 17-18°C.

Interior



A light, airy and welcoming interior, enhanced by LED lighting, large windows and a gloss finish to panels.

Electrics



The fully multiplexed electrical system is accessed in one central location. Similarly, wiring harnesses are reached easily.

QRG System



Patented, quick release glass system that reduces window replacement from 3 hours to 3 MINUTES.

Reliability



Analysing every fault reported on every ADL two-axle double deck for eight years has led to reliability improvements across the board.

Maintenance



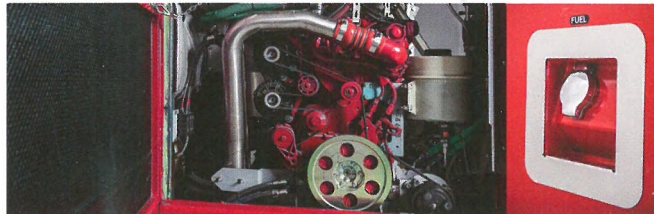
Access to all regularly maintained items has been improved as a result of a three-year customer engagement programme.

Driver's Environment



The driver's cab is designed for maximum comfort, safety, efficiency and ease of use.

Engine



Robust 6.7 litre Euro6 Cummins engine that's proven, reliable and can optimise performance week-after-week, year-after-year.

Manufacturing



A new approach to manufacturing reduces build hours, improves quality and reinforces production consistency across multiple build sites.

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