PURE ELECTRIC. ZERO EMISSIONS
The Benefits

» Proven drivetrain
» Zero emissions powertrain improves air quality
» Reduced noise levels
» Smoother ride for passengers and driver
» Significant reduction in fuel costs
» Rapid charging at easily installed charging stations
» Easily manoeuvrable
» High standards of passenger comfort
» ADL quality British build

BYD Iron-phosphate battery technology provides higher safety

PURE VISION
The age of pure electric power has arrived

Cleaner cities. Quieter streets. Zero emissions. Lower operating costs. The benefits of the BYD ADL Enviro200EV are clear.

The Enviro200EV brings together the proven battery and electric technology of BYD and the outstanding design and build expertise of Alexander Dennis Limited (ADL). BYD is already the world’s leading manufacturer of all-electric buses having produced more than 10,000. ADL is the UK market leader and one of the world’s fastest growing specialists in designing and building buses that meet the demands of modern operators.

World-leading technology. Built in Britain

The Enviro200EV pure electric bus may be the shape of the future, but it’s grounded solidly in meeting the needs of today’s operators. The battery technology at the heart of the Enviro200EV is already well-established through millions of miles of passenger-carrying service around the globe and is already delivering significantly lower cost of operation. Add the proven design and build track record of ADL into the mix and you have a world-class bus that’s ready to go into service now.

The infrastructure required to maintain the vehicle, such as charging points, can be supplied by BYD and is easily deployable and more than flexible enough to comply with relevant building and planning regulations.

The new age of urban transport is here.
The Enviro200EV is the future of urban transport. Cleaner air and lower noise levels - both inside and out - open up opportunities never dreamed of before.

City streets free from fumes and pollution. City centres where you can hear yourself talk. A more relaxed, healthier, cleaner life for all.

But there’s more to this quiet revolution than the social and environmental benefits. Think about what a low-noise bus means when it comes to running night services that won’t disturb anyone’s sleep. Think about opening routes through quiet zones and streets which, previously, would be off limits to noisy and polluting buses.

Think about a better quality of life that’s all made possible by the Enviro200EV.

**Zero Emissions**
Pure electric means no more CO₂ or NOₓ, particulate pollution, helping improve air quality in urban areas.

**Reduced Operating Cost**
The cost of electricity to operate the 9.7 m BYD 200EV is approximately three times less than the price of diesel fuel. It does not only save the environment, but also reduces your operating costs by charging at night on low rate electricity.

**Quiet Comfort**
Because the Enviro200EV is a zero emissions vehicle it has no diesel engine noise, delivering an extremely quiet experience both for passengers and other road users.

A cleaner future for our cities

*Can vary with road conditions, topography etc.*

Improved air quality with zero emissions.

Reduced external noise for silent zones and built up areas.
PURE PLEASURE
A better way to travel

One of the attractions of the all-electric, zero-emissions Enviro200EV is the fact that acceleration is seamless. No gear changes mean a gentle, smooth and quiet experience that all passengers will love. Better still, the Enviro200EV retains all the class-leading features of ADL’s proven and successful Enviro200 midi-bus, including excellent low-floor access, spacious interior, large windows, and LED lighting.

It all adds up to a superior ride, building on ADL’s world of experience in designing and manufacturing exceptional buses and incorporating BYD’s cleaner, quieter electric powertrain and industry-leading battery technology. Unlike their competitors, the BYD batteries allow full operation of an average urban daily shift without recharging being necessary.

No gear changes. Just a smooth, quiet and relaxed experience

Welcome Environment
Spacious low-floor access, bright and airy interior with large windows and LED lighting, a sophisticated temperature control system and hopper windows provide an enhanced passenger experience.

Quiet, Comfortable and Smooth Ride
Comfortable seating with no compromise on legroom – capacity for up to 90 passengers, plus an expertly packaged and peaceful ride thanks to an electric drive free from engine noise and delivering its power smoothly.

Easy Access
Low entry, wide doors, a broad gangway and a flat floor coupled with ample space for buggies and wheelchair users.

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**PURE PERFORMANCE**

An environmentally-friendly bus designed to deliver reduced operating costs

BYD’s development approach is integral to their global electric bus leadership – 10,000 buses produced, far in excess of any competitor.

Operating costs are lower, thanks to a significant reduction in fuel costs. By working with ADL, these benefits have been built into a bus that is a joy to travel in and a dream to drive. The driver’s environment is extremely comfortable, it’s a world-class ergonomic workspace that offers superior visibility. Better still, the quarter operating environment reduces stress, while improving bus operators’ bottom line.

Operational benefits at a glance

- Zero emissions powertrain combined with stop-start, smart accessories, electric cooling and lightweight body offer significant reduction in fuel costs
- Efficient, rapid charging within the maximum productivity and minimum downtime delivering an outstanding 18hrs service on a single charge
- Regenerative Braking System converts part of the kinetic energy into electricity and stores it in the battery to give additional driving range
- ADL lightweight aluminium body structure reduces curb weight, improves power and controls performance

**Low Cost, Rapid Charging**

The BYD charging facility is small and easy to install. It doesn’t require a special station, it can be easily placed in a depot using just 80kW AC of charging power.

**Wheel-Hub Motor Assembly**

The rear drive axle system, developed by BYD, integrates the wheel-hub drive and regenerative braking technologies, and at the same time, provides exceptional passenger comfort.

**Electric Powertrain System**

Integrated onboard charger controls the functions of the battery and motor allowing the driving motor to run in reverse when required. The battery management system consists of the signal collector and controllers which can monitor every cell with working status. Other controllers include the HW distribution box, DC-DC retrofitting box, a box for the BCM.

**Regenerative Braking System**

The Enviro200EV features a Regenerative Braking system, which converts part of the kinetic energy into electricity and stores it in the battery to give additional driving range. The vehicle range can be increased accordingly with lower noise by adopting such a regenerative system.

**The Power at the Heart of the Enviro200EV**

BYD is the first company in the world to market full commercial use of Iron-Phosphate batteries.

- Environmentally-friendly: BYD batteries don’t include any heavy metals or electrolytes. No emissions or pollution are caused during production. Waste batteries can be recycled with minimal environmental impact.
- Long service life: Even after 10 years continuous operation and recharge, BYD batteries retain 75% of their charge.
- Stable and safe: BYD’s batteries have passed rigorous tests for safety, including crash, impact, fan and penetration by sharp objects.

**Driver Comfort**

The driver’s area is a spacious ergonomic workspace with well positioned mirrors, featuring easy access to all controls in an ergonomically designed driving environment.

**QRG – Quick Release Glass**

ADL’s patented QRG system reduces window replacement from three hours to three minutes.

**Front and Rear Suspension**

State-of-the-art suspension for improved ride comfort, reduced costs and greater reliability.

**Simple Maintenance**

Expansive doors and panels provide direct access to key components, for efficient servicing and repairs.

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Chassis Specification

- Full suspension suspension within closed frame
- Front: 40 x 120 mm x 6 mm box. High-strength steel. Bolted modular platform
- Rear: 40 x 120 mm x 6 mm box. High-strength steel. Bolted modular platform
- Front, side and rear LED illuminated blinds are also available.
- The standard vehicle is supplied with a blown air heating and ventilation system as standard.

- Our vehicles are designed and Type Approved through the UK National Small series. Other country specific legislation may differ due to specifications.
- The roof consists of single piece composite panels which are replaceable by one man from inside the bus thus removing the need to work at height from platforms. Front and rear glazing has a unique sealing system reducing water ingress quicker to replace than a gasket glazed vehicle. 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 with active seals for improved sealing performance.
- Standard vehicle is supplied with a blown air heating and ventilation system as standard.

- Drivers’ Cab
- The complete safety and security of the vehicle is ensured not only by the frame optimised for low weight and high strength. The body is rigidly fixed to a fully integrated steel chassis helping to prevent condensation. The front, side and rear glazing has a unique sealing system reducing water ingress quicker to replace than a gasket glazed vehicle.
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- Electric System
- The high voltage body structure is designed to carry a maximum of 10000 kg. The battery is designed to carry a maximum of 10000 kg.
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- Powertrain
- The motorised unit is a separate unit consisting of the motor, allowing the driving motor to run in reverse when required.
- The on-board charger controls the functions of battery and motor, allowing the driving motor to run in reverse when required.
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- Electrical Equipment
- Separate coolant header tank with sight glass and offside hydraulic fan drive.
- The motorised unit is a separate unit consisting of the motor, allowing the driving motor to run in reverse when required.
- The on-board charger controls the functions of battery and motor, allowing the driving motor to run in reverse when required.

- Suspension
- Electronically controlled air suspension (ECAS).
- Anti-roll bar and four double-acting dampers.
- Suspension contours eliminating component intrusion into passenger saloon areas.

- Instrumentation
- Digital tachometers and an analogue speedometer are fitted. 
- Driver’s cab air-conditioning/saloon chilled air system.
- Continuous flush light generator with wiper and indicator.
- External lighting check function.
- Illumination.
- Running data and intuitive On-Board Diagnostics.

- Heating & Ventilation
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- Body Composition
- Clear door width mm ENT: 1163 ; EXIT:1030
- Passenger capacity* 90
- Tyres 245/70R 19.5
- Approach/departure angle ° 7.5 / 7.0
- Boarding height mm 339
- L/W/H mm 12029 x 2470 x 3385
- Doors 2
- Turning circle m 10
- Powertrain
- The motorised unit is a separate unit consisting of the motor, allowing the driving motor to run in reverse when required.
- The on-board charger controls the functions of battery and motor, allowing the driving motor to run in reverse when required.

- Wheel and Tyre
- Wheels: 8.25” x R22.5” Aluminum.
- Tyres: 275/70R22.5 X Incity Michelin tubeless radial.

- Braking System
- Brake booster: Mechanical vacuum.
- Full Kneeling and fast-kneel facility on front suspension.
- Anti-roll bar and four double-acting dampers.
- Suspension contours eliminating component intrusion into passenger saloon areas.

- Environmental
- Water-cooling system.
- Rectangular frame section is 120 mm x 60 mm x 6 mm thick.
- Battery: 2 x 12 volt heavy duty maintenance-free batteries with 70 ampere-hour capacity. Mounted on slide-out carrier under floor. 24 volt, single pole negative earth.

- Electric Powertrain System
- Engine power – 90 kW. Maximum power – 140 HP.
- Rectangular frame section is 120 mm x 60 mm x 6 mm thick.
- Full Kneeling and fast-kneel facility on front suspension.
- Anti-roll bar and four double-acting dampers.
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- Wheels: 8.25” x R22.5” Aluminum.
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- Chassis Powertrain System
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- Electric System
- The complete safety and security of the vehicle is ensured not only by the frame optimised for low weight and high strength. The body is rigidly fixed to a fully integrated steel chassis helping to prevent condensation. The roof consists of single piece composite panels which are replaceable by one man from inside the bus thus removing the need to work at height from platforms. Front and rear glazing has a unique sealing system reducing water ingress quicker to replace than a gasket glazed vehicle.
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