BYD Europe B.V

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The ALL-NEW BYD eBus B12

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0 Emissions **100%** Electric Customization Modularization

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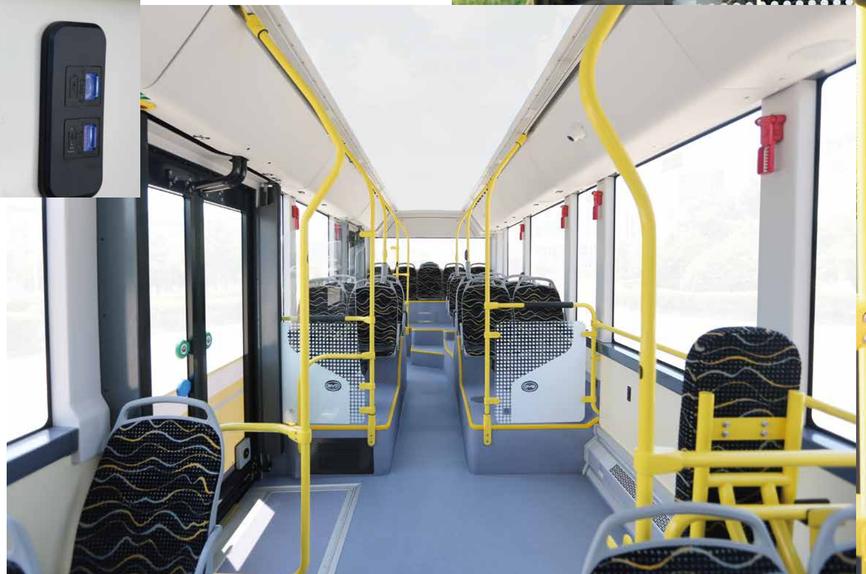

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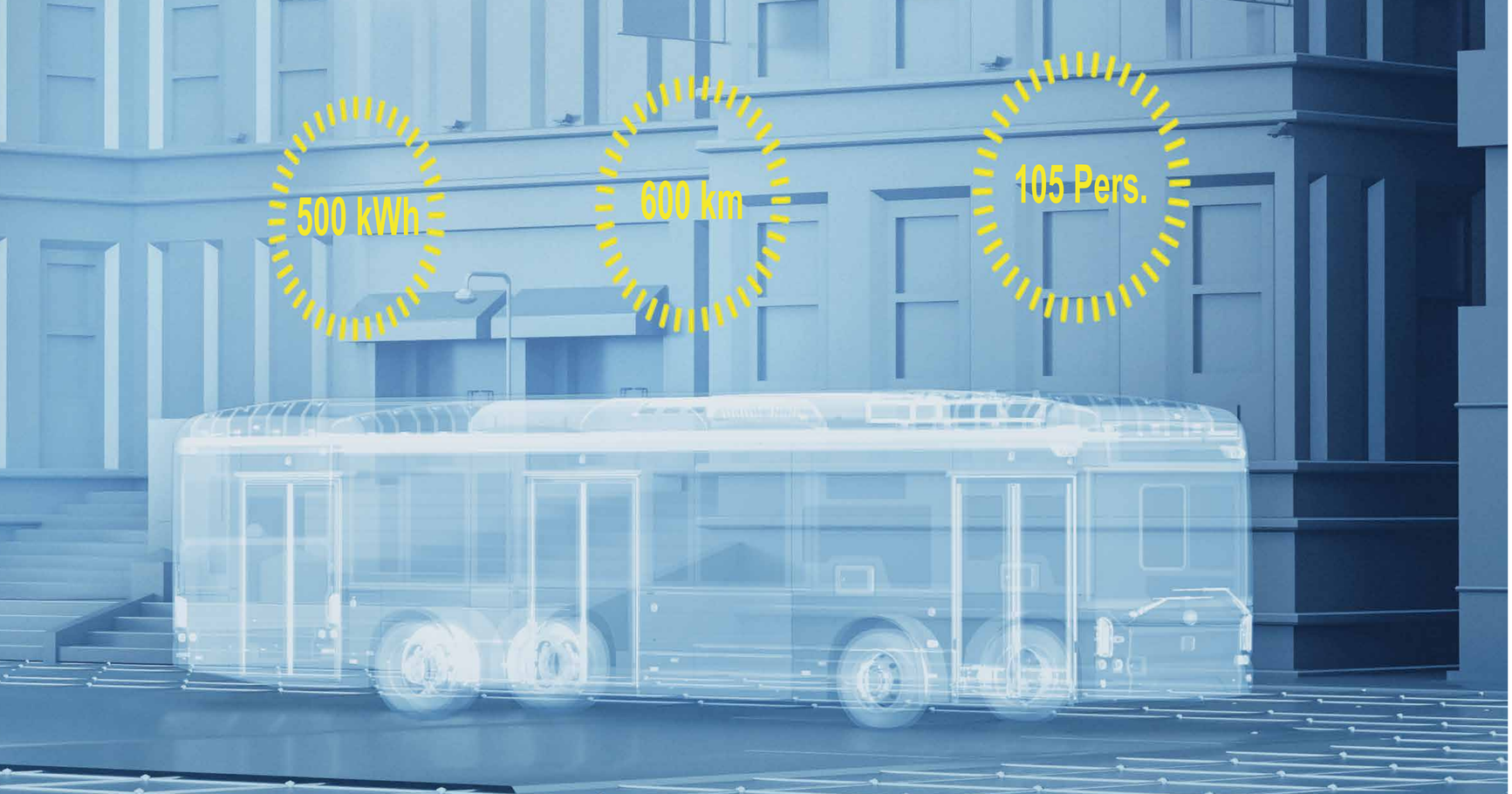


Unrivalled performance

- *Up to **600 km** range with one charge*
- *Up to **105 passengers***
- *Up to **500 kWh** battery capacity*

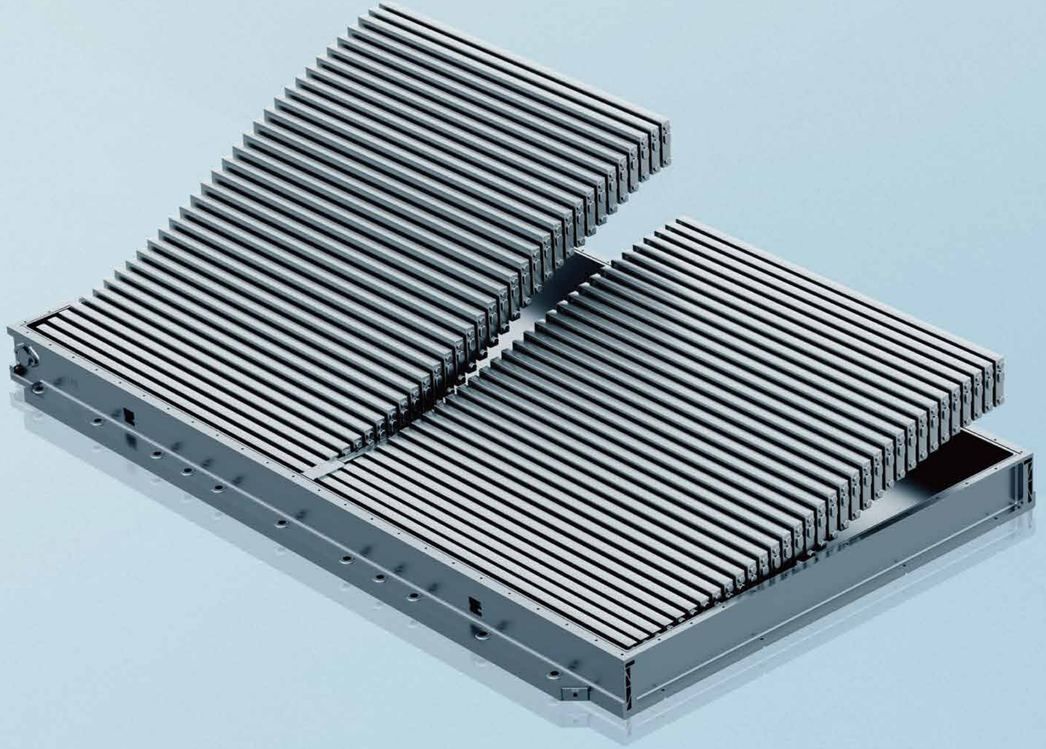
Designed with passenger comfort in mind, the B12 electric bus boasts an impressive capacity, accommodating up to 105 passengers when fully loaded. The spacious interior provides ample seating arrangements while still prioritising passenger comfort during transit.

With up to 600 km range, the all-new B12 is an ideal choice for high-demand routes, ensuring efficient transportation and passenger satisfaction.

Maximum safety, all included

The BYD B12 incorporates as standard equipment the following safety elements and certifications:

- ***Advanced Emergency Braking System (AEBS)***
- *Driver Drowsiness and Attention Warning* ***(DDAW)***
- *Blind Spot Monitoring* ***(BSM)***
- *Lane Departure Warning System* ***(LDWS)***
- *Forward Collision Warning* ***(FCW)***
- *Headway Monitoring & Warning* ***(HMW)***
- *Pedestrian & Cyclist Collision Warning* ***(PCW)***
- *Traffic Sign Recognition* ***(TSR)***
- *Speed Limit Indicator* ***(SLI)***
- *Intelligent Speed Assistance* ***(ISA)***
- ***Alcolock***
- ***R29 -*** *Driver protection certification*
- ***R66 -*** *Vehicle rollover certification*
- ***R93 -*** *Front underrun protection*
- ***R155/R156 -*** *Cyber security certification*



BYD Blade Battery

BYD has been a pioneering name in the battery industry for more than 28 years. Our latest game-changing Blade Battery has passed a series of extreme tests in rigorous conditions making it one of the world's safest batteries.

Enhanced safety:
The Blade Battery has safely passed the Nail Penetration Test without emitting fire or smoke.

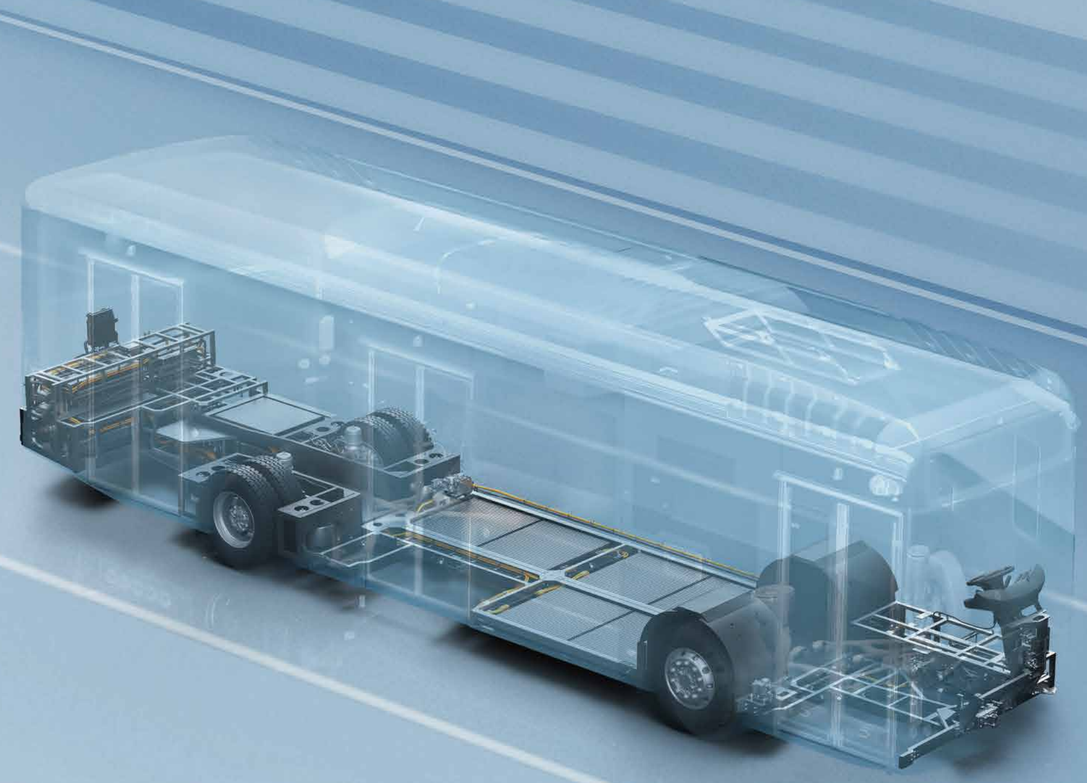
Optimised strength:
Arranged in an array in one pack, each cell serves as a structural beam to help withstand the force.

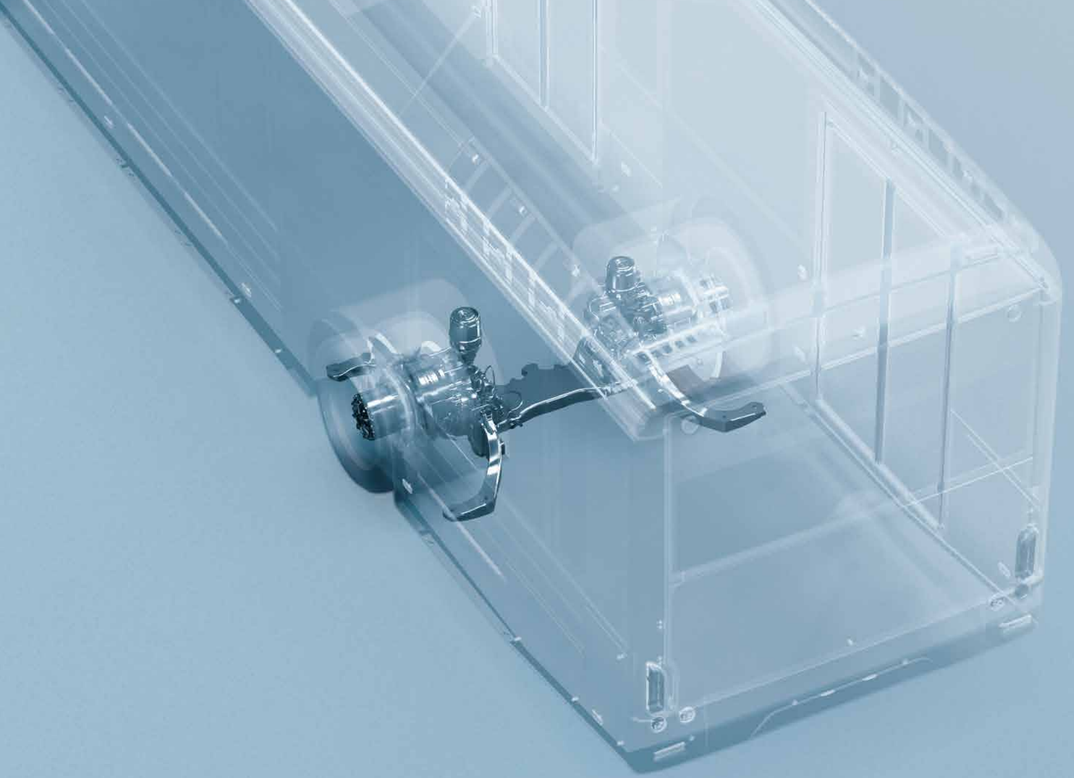
Longer range:
The volume utilisation efficiency of the Blade Battery has been increased by over 50% compared with the traditional battery packs, which provides enhanced energy density, delivering a longer range.

Longer lifecycle:
The Blade Battery has a 10 year – 80% SOH guarantee.

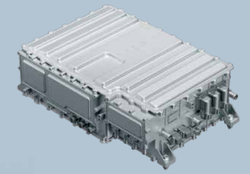
Blade Battery in Chassis

The BYD B12 revolutionary battery integration inside the chassis has multiple advantages. The batteries ingeniously form part of the structure of the vehicle, increasing torsional stiffness to an impressive 55,000+N.m/° while reducing the vehicle centre of gravity by 40% and at the same time increasing the vehicle tilt angle by 47%, enhancing stability and maneuverability. The overall bus weight is also reduced by 10% thus increasing the range and reducing the energy consumption.





6-in-1 Integrated Controller with Silicon Carbide technology

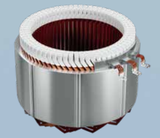


The B12 incorporates the unique BYD 6-in-1 controller that integrating 6 major electric elements in one plug and play set (2 electric motor control units, 1 steering control unit, 1 air compressor controller, 1 DC-DC converter and 1 power distributor unit).

This allows for quick and convenient 'on the road' changeover and reduces downtime. In addition, the 6-in-1 BYD controller uses cutting-edge Silicon Carbide (SiC) technology.

The SiC modules yield an impressive 99.5% efficiency with a 15% weight reduction compared to traditional controllers.

Wheel Hub Hairpin Motor



This innovative bus is equipped with two 150kW wheel hub hairpin motors for maximum energy efficiency.

This advanced technology combines flat wire and an oil-free solution, resulting in a 15% weight reduction.

The motor operates at an impressive 95.5% efficiency with very low motor noise levels. It offers a power boost of up to 600 N·m torque, providing responsive acceleration, especially beneficial on steep inclines and for quick starts, delivering a dynamic driving experience and enhanced overall performance.

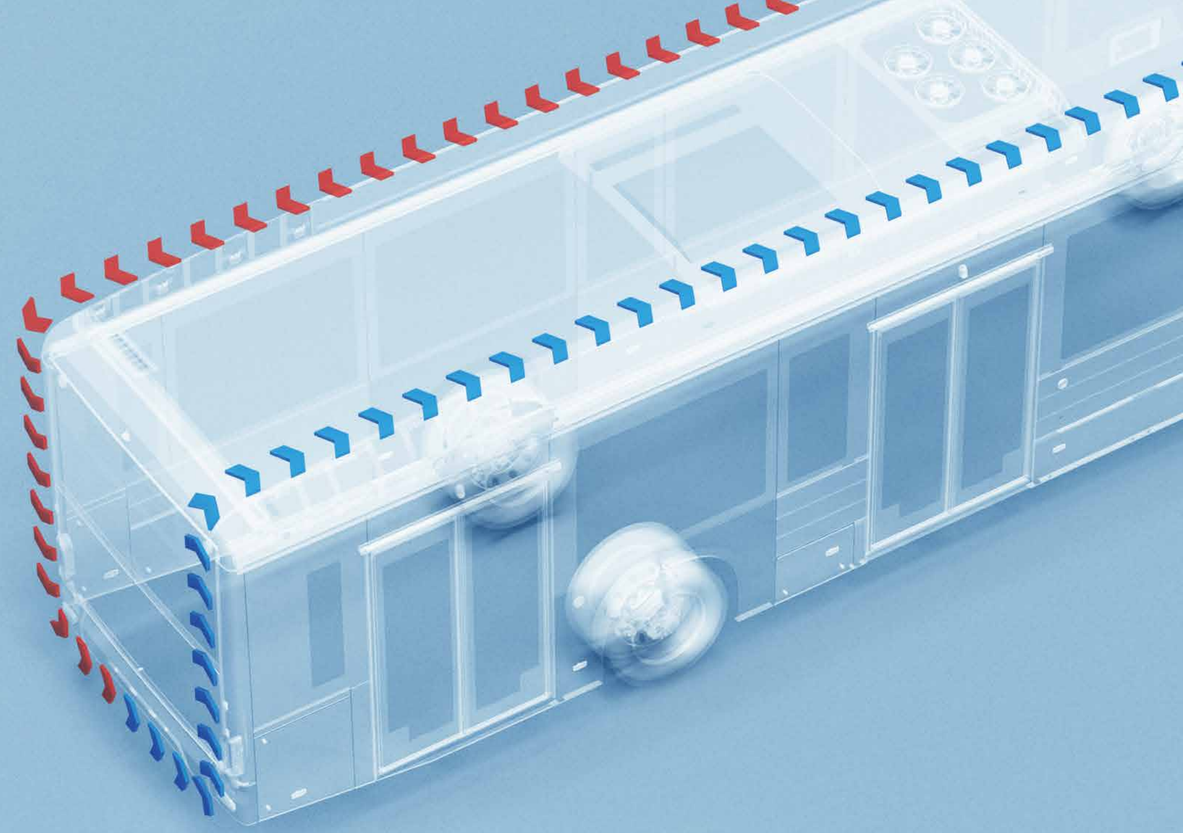
By pushing the boundaries of motor design, the B12 ensures optimal power delivery and a quieter, more comfortable ride.

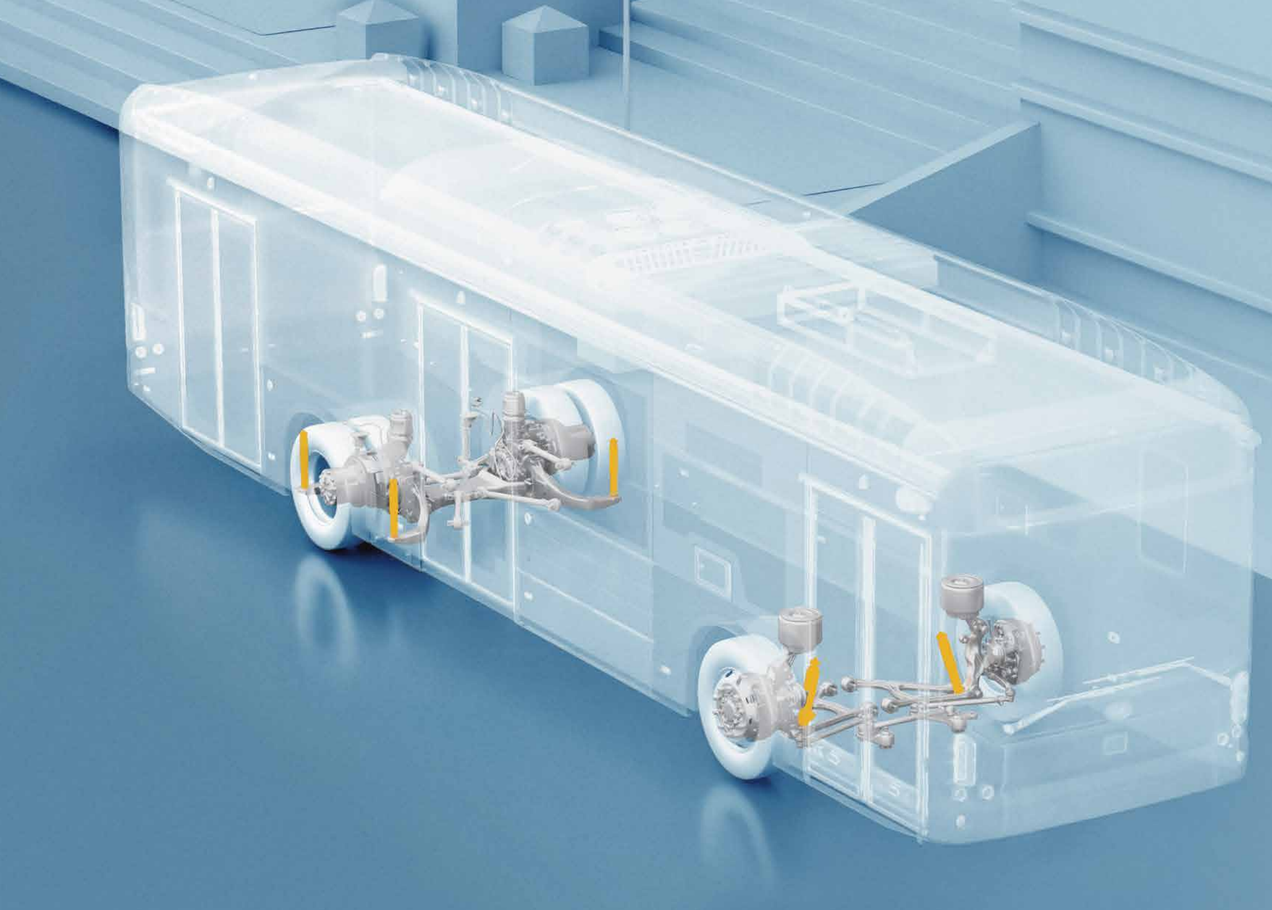
Integrated Thermal Management System

The B12 features an Integrated Thermal Management System incorporating various components for optimal energy utilisation.

This system comprises integrated drive cooling, battery cooling, battery heat pump heating, and drive waste heat recovery.

By effectively managing thermal energy, the B12 battery heating speed increases by 30%~80% and energy consumption is reduced by 10%~50%, contributing to extended range and reduced operating costs.

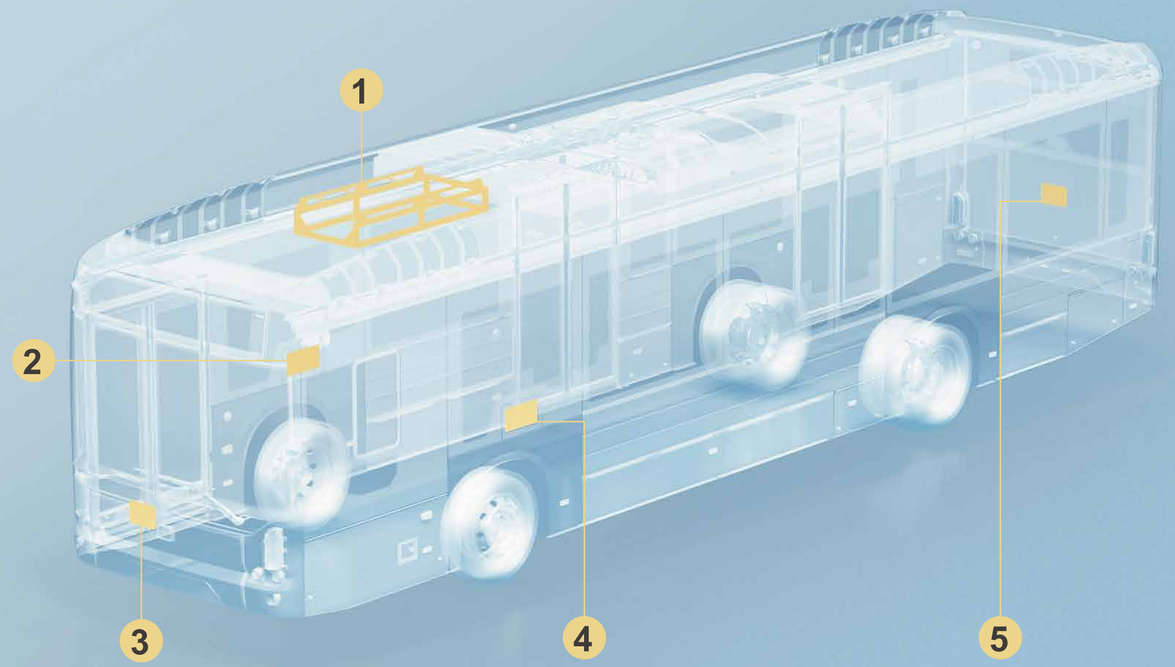




BYD Active Suspension Control System

Incorporating the Active Suspension Control System, the B12 sets a new standard for ride quality. The electronically controlled CDC shock absorbers provide lower damping, resulting in improved driving comfort.

The suspension can be adjusted in real-time based on the vehicle's motion status, allowing the driver to better control the vehicle and enhancing both safety and passenger satisfaction.



Flexible and powerful charging solutions

The B12 electric bus provides flexible and diverse charging options with various charging port positions (front, rear, left, right, and top).

The charging power options are also impressive, with a single gun capable of 200 kW, and a maximum charging power of 500 kW with the use of pantograph.

This means that B12 can conveniently be charged in the shortest time from 0% to 100% in just one hour, minimising downtime and maximising productivity for bus operators.

Multiple charging ports combinations available. For instance:

1 2 4 | 1 3 5 | 1 2

FleetLink

OTA Fleetlink upgrade

The B12 is equipped with an OTA Fleetlink upgrade feature. This technology enables Over-The-Air updates and maintenance, eliminating the need for physical visits to service centres and reducing downtime.

Fleet operators can remotely access and upgrade the bus systems, ensuring that the B12 remains up-to-date with the latest software enhancements and optimisations.

Zero emissions and compliance with environmental standards

As an eco-friendly choice, the B12 electric bus operates with zero-emissions, making a substantial contribution to reducing air pollution and carbon footprint.

The bus is designed to comply with strict environmental regulations such as ***REACH, LCA, EPD,*** ensuring the use of sustainable materials and manufacturing processes.

With a commitment to environmental responsibility, the B12 is the epitome of cleaner and greener transportation.

Basic parameters

Vehicle length	12130 mm
Vehicle width	2550 mm
Vehicle height	3200 mm
Wheelbase	5950 mm
Front and rear overhang	2,750/3,430 mm
Angle of approach/departure	7°/7°
Body type	Low Floor
Max G.V.W	20 T
Tire size	275/70R22.5
Range (Estimated)	Up to 600 km
Passenger numbers	Up to 105

Chassis

Battery model	BYD LFP Blade Battery
Battery capacity	Up to 500 kWh
Motor model	BYD wheel hub motor, 150 kW×2
Motor type	Hairpin motor
Controller	BYD SiC (Silicon carbide) 6-in-1 controller
Battery management system	BYD integrated BTMS
Front axle	ZF independent suspension
Drive axle	BYD axle with integrated BYD wheel hub hairpin motors
Suspension system	ECAS (Electronic-Controlled Air Suspension) with kneeling function and PCV (Premium Comfort Valve) shock absorber (Optional)
	ESAC (Electronic Shock Absorber Control) active suspension with kneeling function and CDC (Continuous Damping Control) shock absorber (Standard)
Steering system	EHPS (Electric Hydraulic Power Steering) (Optional)
	Electro-Hydraulic Steering System with a steering control unit and an electric motor (Standard)
Braking system	EBS (Electronic Braking System)+ASR (Acceleration Slip Regulation)
	ESC (Electronic Stability Control System)
	AEBS (Advanced Emergency Braking Sytem)

Body

Body frame	BYD IV aluminum body and composite material (Roof)
Exterior rearview mirror	Digital exterior rearview mirror
Wheelchair ramp	Electric and manual dual mode wheelchair ramp
Roof hatch	Electric roof hatch (Standard)
	Manual roof hatch (Optional)
	Bicycle Rack (Optional)
Fleet management system	Fleetlink

Safety certification

R66 - Vehicle rollover certification (Optional)
R29 - Driver protection (Standard)
R93 - Front underrun protection (Standard)
R155/R156 - Cyber security certification (Standard)
Advanced Emergency Braking System (AEBS) (Standard)
Driver Drowsiness and Attention Warning (DDAW) (Standard)
Blind Spot Monitoring (BSM) (Standard)
Lane Departure Warning System (LDWS) (Standard)
Forward Collision Warning (FCW) (Standard)
Headway Monitoring & Warning (HMW) (Standard)
Pedestrian & Cyclist Collision Warning (PCW) (Standard)
Traffic Sign Recognition (TSR) (Standard)
Speed Limit Indicator (SLI) (Standard)
Intelligent Speed Assistance (ISA) (Standard)
Alcolock (Standard)

Charging concept

Charging system	Plug charging (CCS) (Standard)
	Pantograph (Optional)
Charging power	Up to 200kW*2 (DC)
	Up to 500kW (Pantograph) (Optional)
Charging time	<3h (DC)
	<10min (Pantograph) (Optional)