

City Electric Bus

8.5 meters version



Data Sheet

Overall Specification	Length (mm)	8545	Power motor Specification	Power motor model	TZ450XSE02 signal stage, big torque electronic motor for Large slope Road
	Width (mm)	2400		Manufacture standard	CNAS standard for electric bus include all the spare parts
	Height (mm)	3255		Type of Power motor	2500Nm Double motor drive
	Wheel base (mm)	4200		Motor rated power/Speed/torque (kW/r/min)	Motor A: 135KW/850rpm/2300Nm
	Tread F/R (mm)	2070/1800		Fuel Type	Pure Electric
	Overhang F/R (mm)	1930/2415		Max. Speed (km/h)	≤70
	Approach/Departure (°)	10/10		Max. Grade Ability (%)	≥20
	Passenger load/seat	64/18-33 ppl.		Min. Turning Diameter (m)	≤24
	Chassis Manufacture	Monocoque		Curb Weight (kg)	9000
	Brake distance (m)	≤10			
	Power drive system position	Electrical drive motor rear mounted			
	Max Total Mass (kg)	12800			
	Minimum ground clearance (under full load)	>180mm			

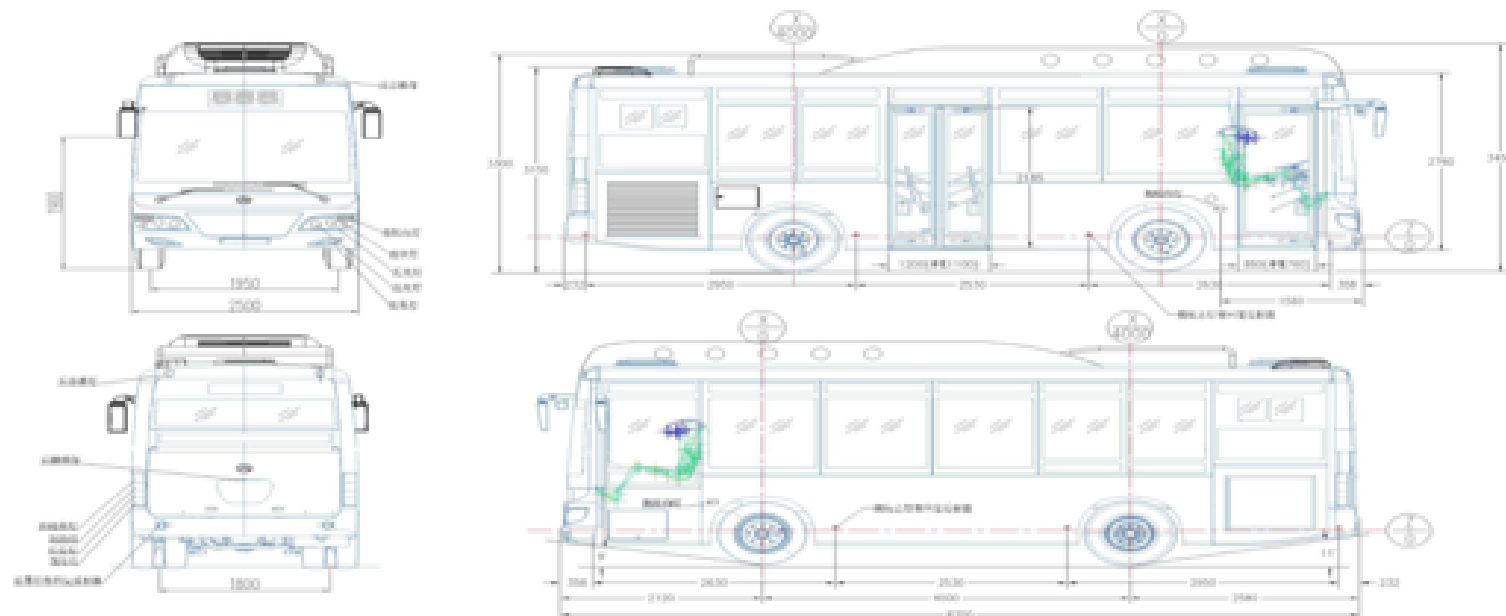
	Power drive system	<p>TZ450XSE02 double motor drive made by 2500Nm power motor</p> <p>Bus DC voltage 600Vdc</p> <p>Motor: torque 2300Nm</p> <p>Continuous power / peak power: 135/185kW – Continuous torque/peak torque: 750/2300Nm</p> <p>Rated speed/maximum speed: 850/2300rpm DC bus/battery voltage: 550 Vdc</p> <p>Cooling method: water-cooled (50% ethylene glycol solution) Cooling the battery when working.</p> <p>Extending the life of battery by ensuring it work in constant temperature from 15 to 50 degree.</p> <p>Reasonable distribute motor output torque by high-speed calculation of Electric motor control system</p> <p>Dual motor release large torque which easy to deal with climbing or continuous large slope.</p> <p>Strong external characteristics, broad and efficient area, plenty of recovery brake</p> <p>In the high gradient, variable working conditions, it could work more faster and more energy efficient.</p> <p>Suitable for heavy-duty city bus</p>
	Motor controller	Double Controller Main Motor KTZ57X41SE02
	Auxiliary controller	Four-in-one controller, including EPS, DEDC, electric air conditioner output, electric defrost output, pre-charge, high-voltage insurance
	High voltage leakage detection	Pulse detector, integrated high voltage cabinet
	Types of energy storage	Power battery

Battery & electric capacity	<p>187KWH lithium iron phosphate roof/rear mounted, 3 Set install on roof, 3 set install on rear, rated voltage 531,3V, 4 hours slow charging battery from 15% SOC to 100% SOC.</p> <p>The size of the battery is</p> <ul style="list-style-type: none"> - 3C 1060*630*240mm, 3 Set top mounted. - 3D 880*6630*240mm. 3 Set rear mounted. <p>Lithium iron phosphate, ATL 1600, energy density GL 150-165Wh/kg)</p>
Power steering system	Double source steering gear booster oil pump
Rear axle	8.5 Tone Maintenance-free rear axle, disc brakes Two-stage strengthen main reduction with fine grinding teeth, disc brakes 22.5 inches with ABS sensor
Front axle	4.5 Tone Maintenance-free gantry rear axle, disc brakes 19.5 inches with ABS sensor
Gap adjustment arm	Disc brake with self-adjusting gap adjustment function
Frame assembly	Monocoque reinforce frame by welding made of special steel. Monocoque frame design must be in accordance with CAE analysis & meet the standard of safe and strength test under CNAS standard. By electrophoresis od whole body, the thickness of the coating is 25-30um to meet the CNAS standard for the vehicle use inn climate and road condition of UAE Suitable to operate even in the rough, hilly road with steep slope/sharp bends road condition of UAE at ambient temperature varying between -5 to 50 degree centigrade and altitude range up to 1000 m.
Drive axle	Single, tubular, double universal joints
Suspension	Front 3 rear 4 leaf spring suspension, front lateral stabilizer bar, two-way acting shock absorber

	Steering System	RHD, Power steering, adjustable steering (combination switch with back and self-locking function), 4 *Φ480 (leather + imitation peach steering wheel) Electric oil pump, oil pump motor controller: 4 in 1 built-in
	Brake System	Dual-circuit gas brake system, front and rear disc wheel brakes, energy storage spring-type parking brake, the main pipe for the internal and external use galvanized seamless steel pipe (transition part of the High strength alloy tube), ABS system, gas brake valve parts are used R switch-type direct-on-type master cylinder, rear valve, quick release valve, air dryers, switch-type manual control valve with muffler device, gas storage tank installed automatic electric heating drain valve. Brake chamber are installed test connector, the front of the vehicle to install the following connector (easy for dragging)
	Cool System	ATS thermostat System. The water pump uses the electronic magnetic force water pump
	Accelerate System	Electric accelerator
	Tire & Wheel	9R22.5 tubeless radial tire (load index: single 152, twins 148), 6.75/22.5 aluminium wheel, 1 spare tire.
	Electric System	24V
	Battery/Generator	2PC x 6-Q-165Ah Maintenance - free batteries /150A DC/DC
	Structure of frame	Frame use monocoque structure and high strength steel. Second step. The design must pass CAE analysis, body cover uses 25-30um zinc coating metal as well as carbon fiber cover to meet the request of light, safe and anti-corrosion according to ECE/CCC standard.
	Door and pump	Double door with front swing door made of aluminium alloy. Emergency switches are installed inside and outside the car, and passenger door emergency switches

Window	Close design of Body glass. Full adhesive front and rear Windshield, Glass-in-Glass type side window (glide glass window), 2pcs roof security window. The windows of the cab are two-way push-pull bonded glass, and the front is fully bonded with laminated windshield. Rear fully bonded tempered glass.
External Rear view mirrors	Rear view mirror, Rabbit ear type manual reversing mirror, 7-inch Visual reversing system including security camera.
Interior Trimming	Luxury Bus interior, composite material air-duct, foaming front & rear top interior, through type LED ceiling light, perforated aluminium plastic top plate. Aluminium drivers cab
Floor	Two step floor, non-slip Quartz sand floor
Seats	Passenger seats: 23 Seat semi-soft seats; driver's seat: with pneumatic cushioning, soft, adjust in 3 directions
Air condition	Weather control Top mounted air conditioner (24000 kcal/h)
Heating Sysyem	High voltage electric defrosts 4 car electric radiators
Handrail and Rings	Aluminium Alloy armrest, lifting ring, whole car armrest with soft sleeve
CAN bus line	CAN bus instruments with 2 standard modules, 3 voltage-type pressure sensors
Audio & Visual System	Automatic Bus stop reporting system, 6 pcs 5-inch loudspeaker
Lighting	Combined head light, taillight, 4 pc independent LED top light, door light
Safe Facility	2 pcs 4 kgs Carbon dioxide fire extinguishers, 5 pcs safe hammer, 5 pcs engine compartment automatic fire extinguishers, 2 set roof battery fire extinguishing system

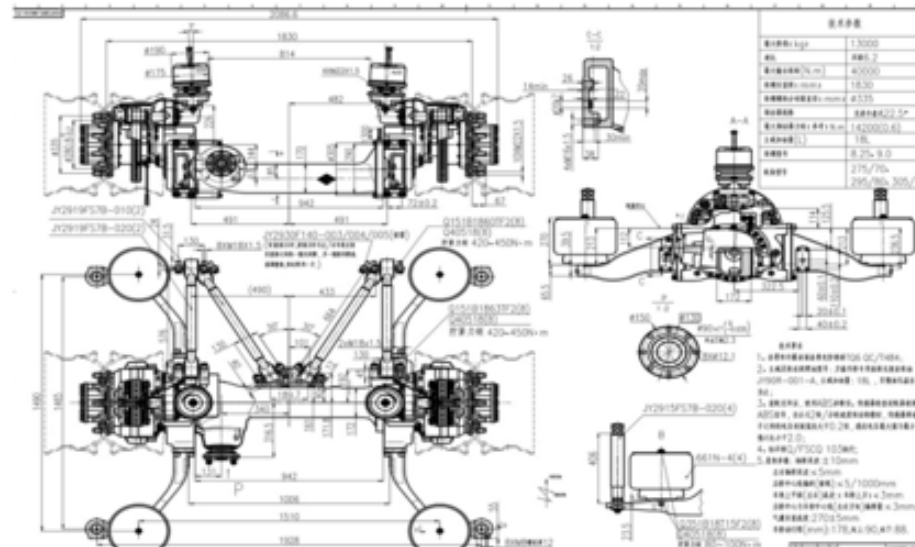
	Other	<ol style="list-style-type: none"> 1. GPS position & driving recorder with 4 cameras 2. New energy smoke alarm system 3. Temperature alarm system 4. Electronic clock 5. Push-button type electronic gear shifter 6. Tooling Box x 1pc 7. LED display board 8. Waring Triangle 9. Trash can
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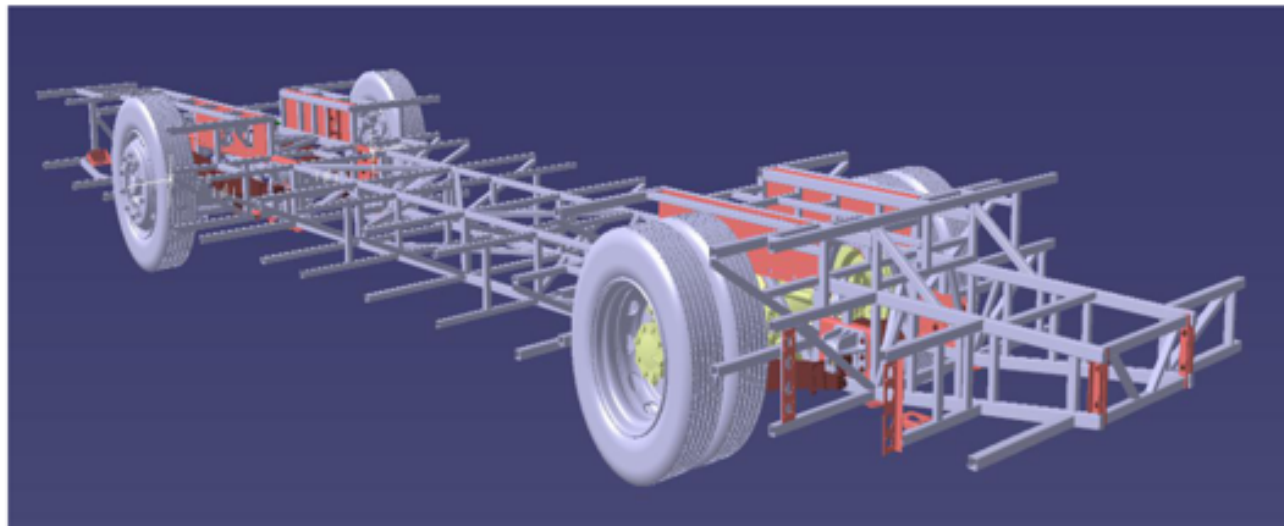


Design in accordance with latest ECE technical standard and CNAS standard.
Work temperature rang from -10 to 60 degrees.

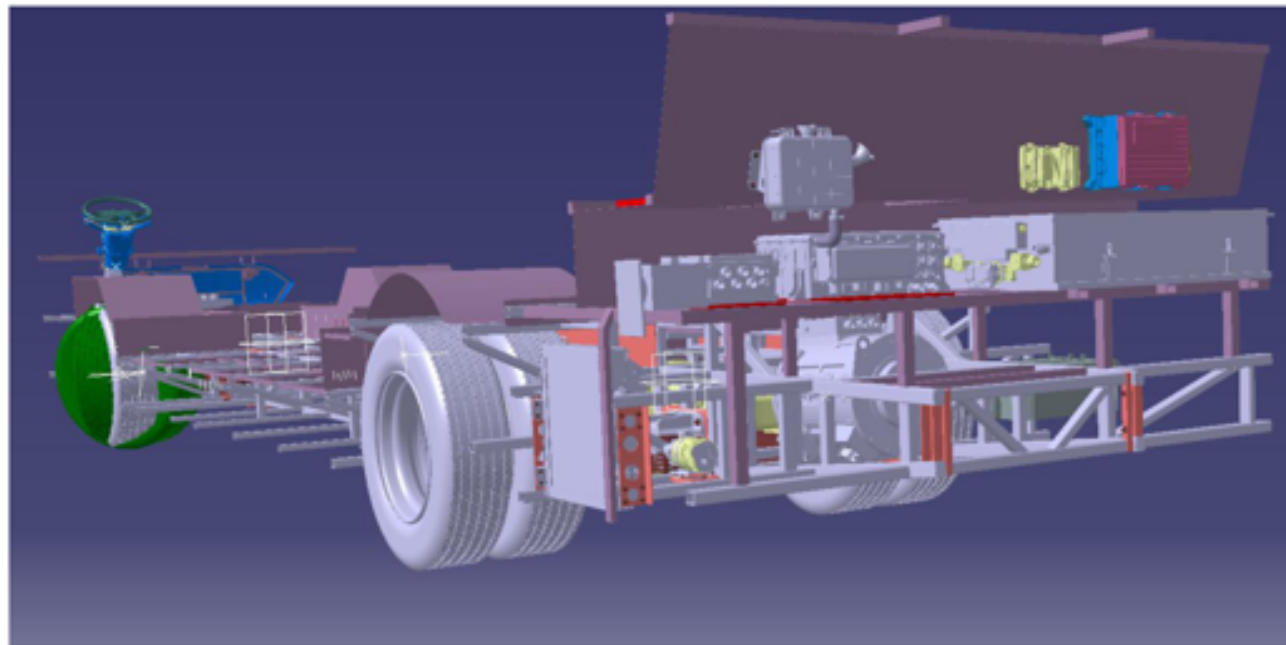
The image displays two technical drawings of a truck chassis. The top drawing is a top-down view, showing the layout of the front and rear axles, the engine compartment, and the fuel tank. The bottom drawing is a side profile view, illustrating the overall length of the chassis, the position of the axles, and the structural frame.

Chassis structure, government and side view. The chassis is welded with high strength alloy steel. All the components of the chassis of the vehicle are subjected to electrophoresis anti-corrosion treatment. The protection time of the coating thickness is not less than 15 years.

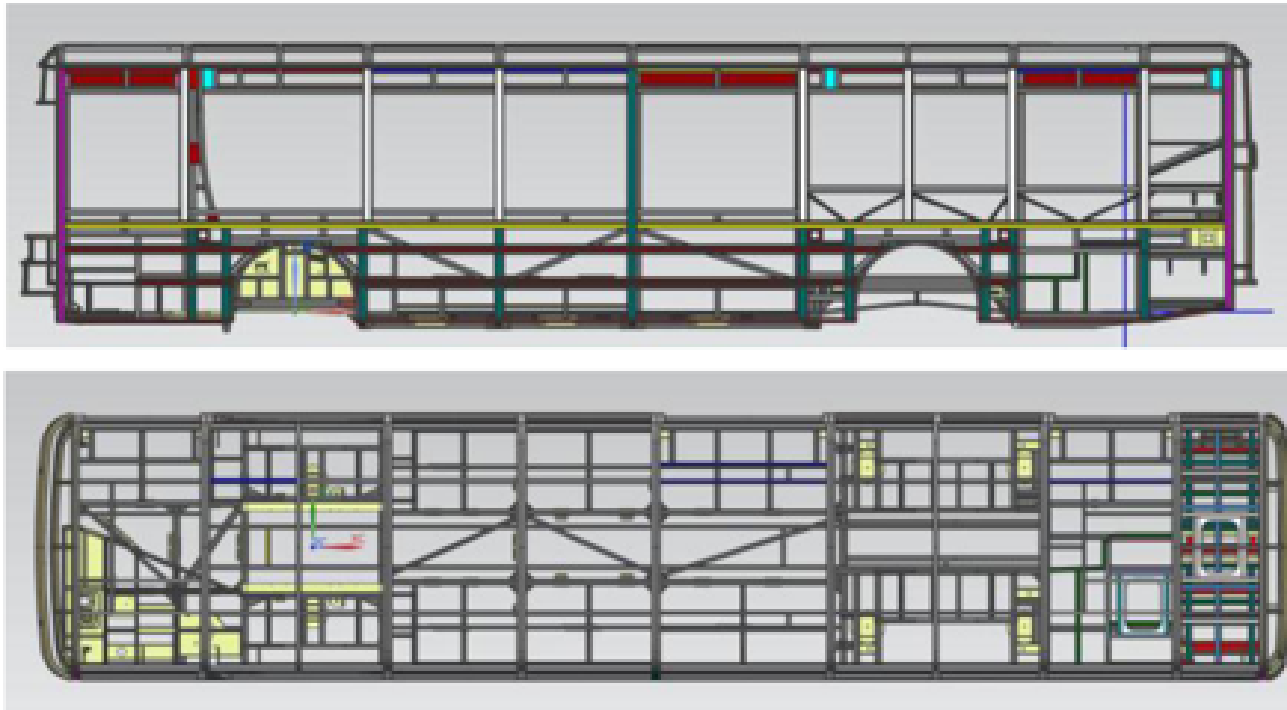




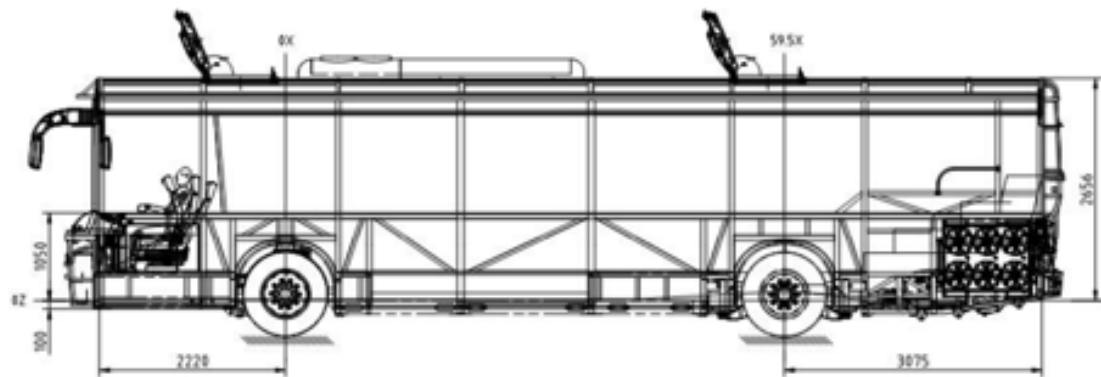
The tire complies with ECE/TS16949 standard. Front and rear axle and chassis, schematic diagram of the ECAS system (buses do not include ECAS) parts and components applicable standard CNAS.



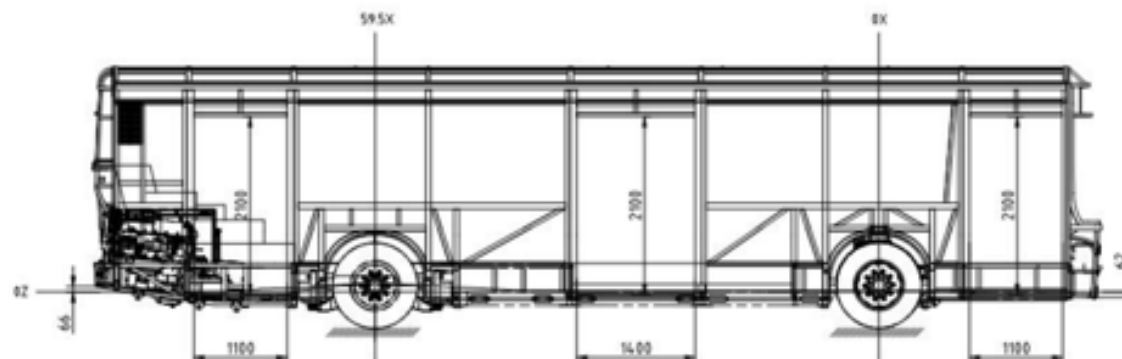
Battery, motor and electric control arrangement. The energy of the storage system is not less than 186 KW, Li-ion Battery. Comply with ECE/TS16949 standards.



The internal structural dimensions of the body (left, top). All components are subjected to electrophoretic anti-corrosion treatment.



The internal structure of the body (left)

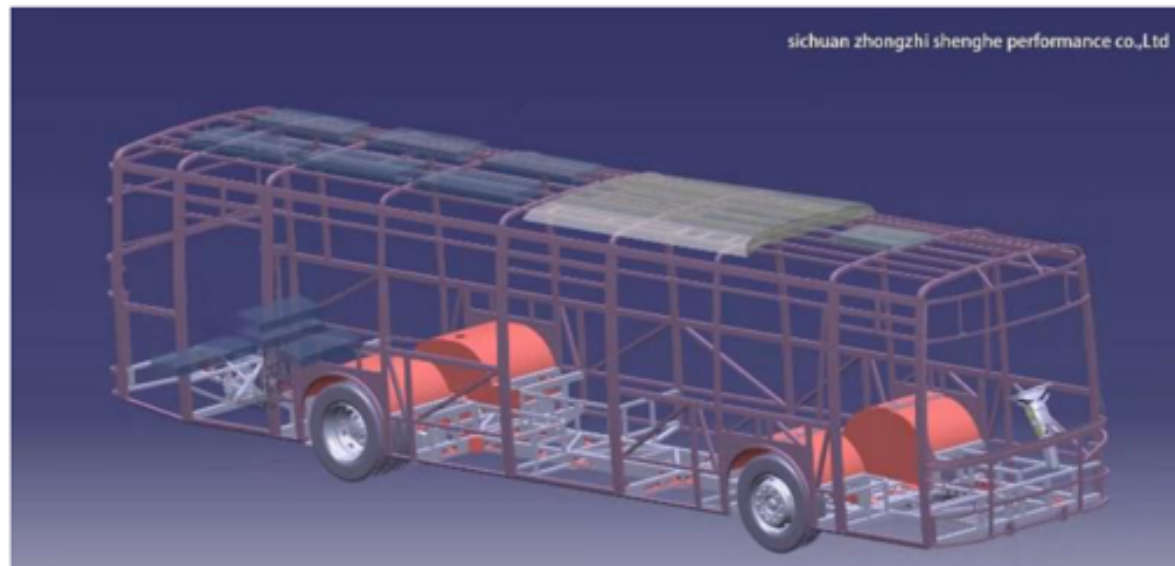


The internal structure of the car body (right). All components are treated with anti-corrosion electrophoresis.

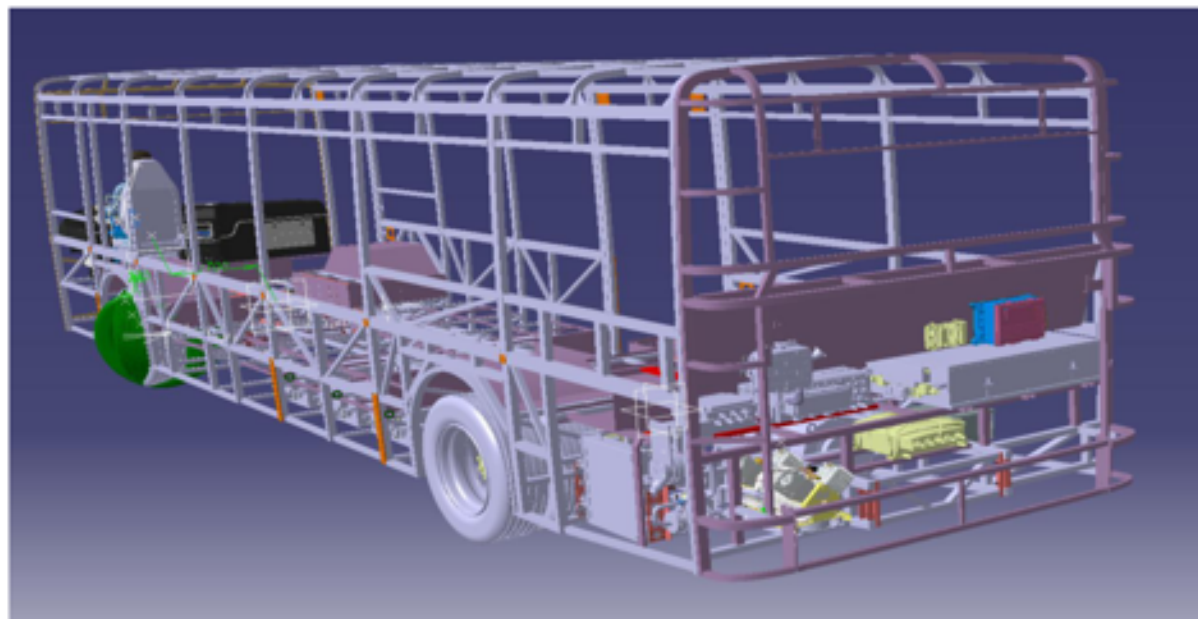
The interior of the car body is covered with heat insulation, sound insulation and fireproof materials.

The ceiling is made of aluminium alloy.

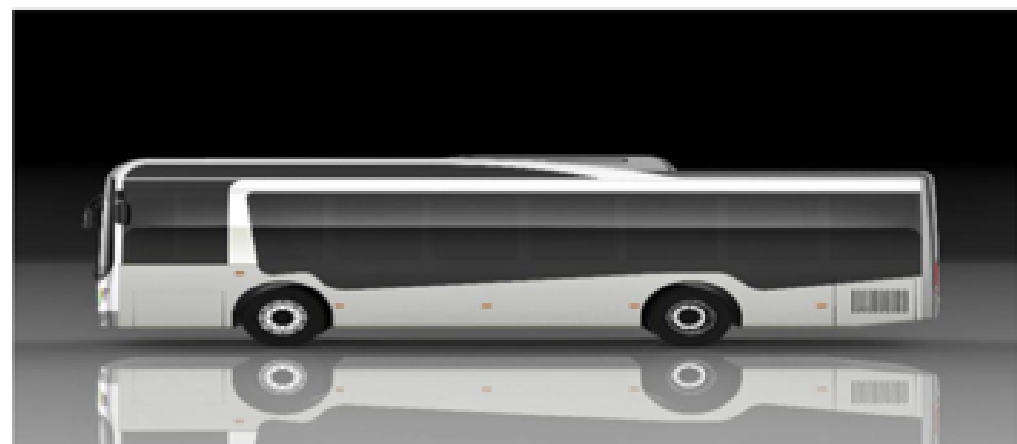
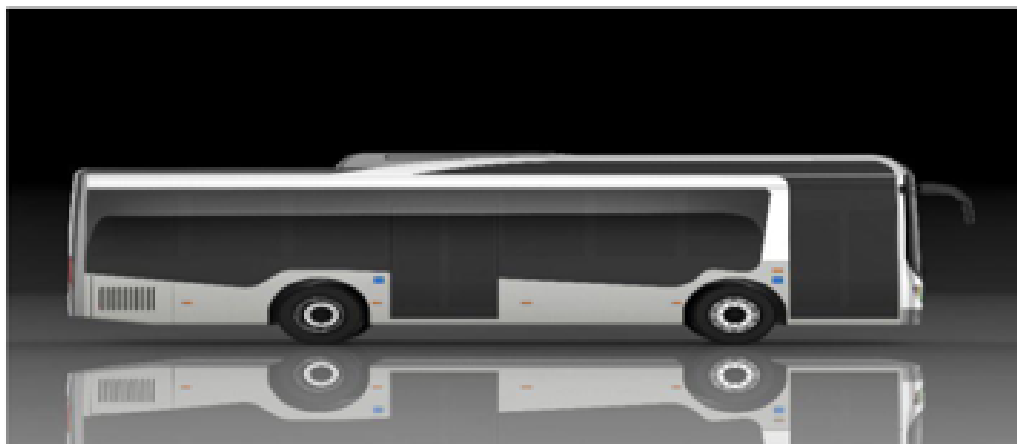
The door adopts aluminium alloy automatic door.



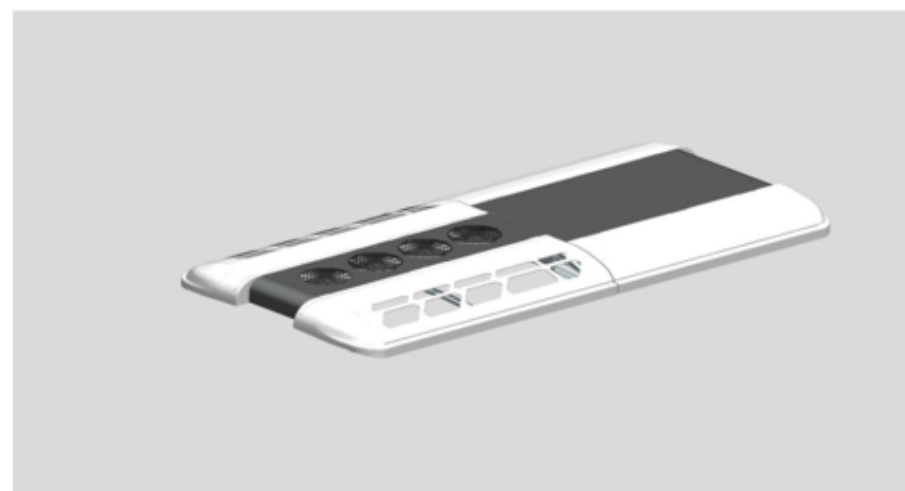
Body + chassis assembly diagram.



Body + chassis + battery, motor electric control assembly diagram.



Vehicle exterior design drawing



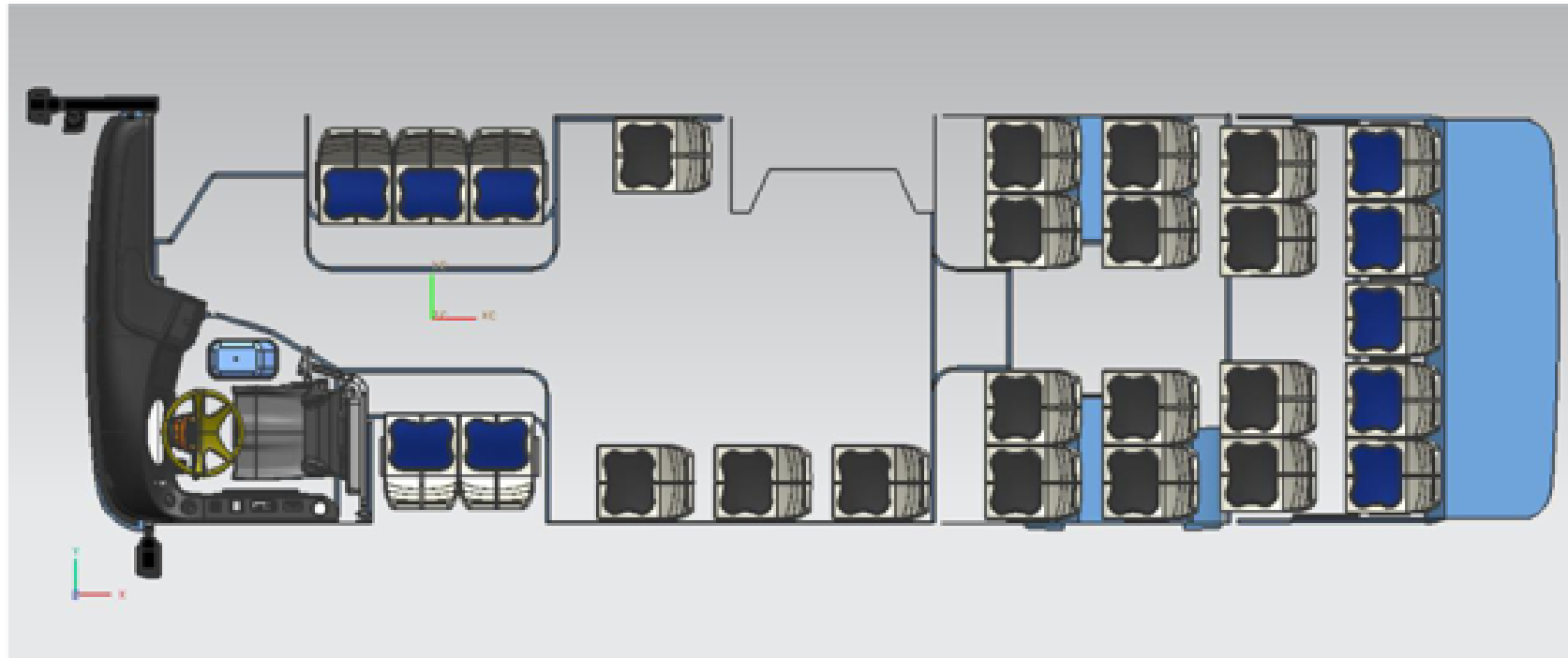
Air conditioner 24000CAL.



The air conditioning installation diagram follows ECE/TS16949 standard.



The large cab is semi-closed to provide a comfortable space for the driver. The instrument panel has a built in "vehicle computer" to integrate all control systems and display vehicle status information (including vehicle speed, real-time power consumption, power, temperature). The middle door is equipped with monitoring probes and automatic opening/closing control buttons.



Seat layout. The driver's seat is an 8-way automatic seat. The passenger seat is PVC + soft cushions. The middle door is arranged with a wheelchair automatic car device. The middle door area is set for pregnant women, and the special seats for the disabled follow ECE/TS16949 standard.



The interior of the front and middle door area includes aluminium alloy ceiling, colorful grain quartz sand floor, seat, LED lamp, stainless steel handrail, UV protection glass, and car window.



LED route sign display in the car.



The in-vehicle monitoring and alarm is equipped with front and rear door monitors, and reversing radar.



The appearance of the whole vehicle (180 degrees).





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