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DMT HYBRID

Think Eco, Move Green



BRAND OVERVIEW

Yutong, with over 60 years of bus manufacturing experience, has marketed in batches to more than 40 countries and regions. As a global leader in bus field, it masters a variety of core technologies. Always adhere to customer-orientation and create user-friendly products.

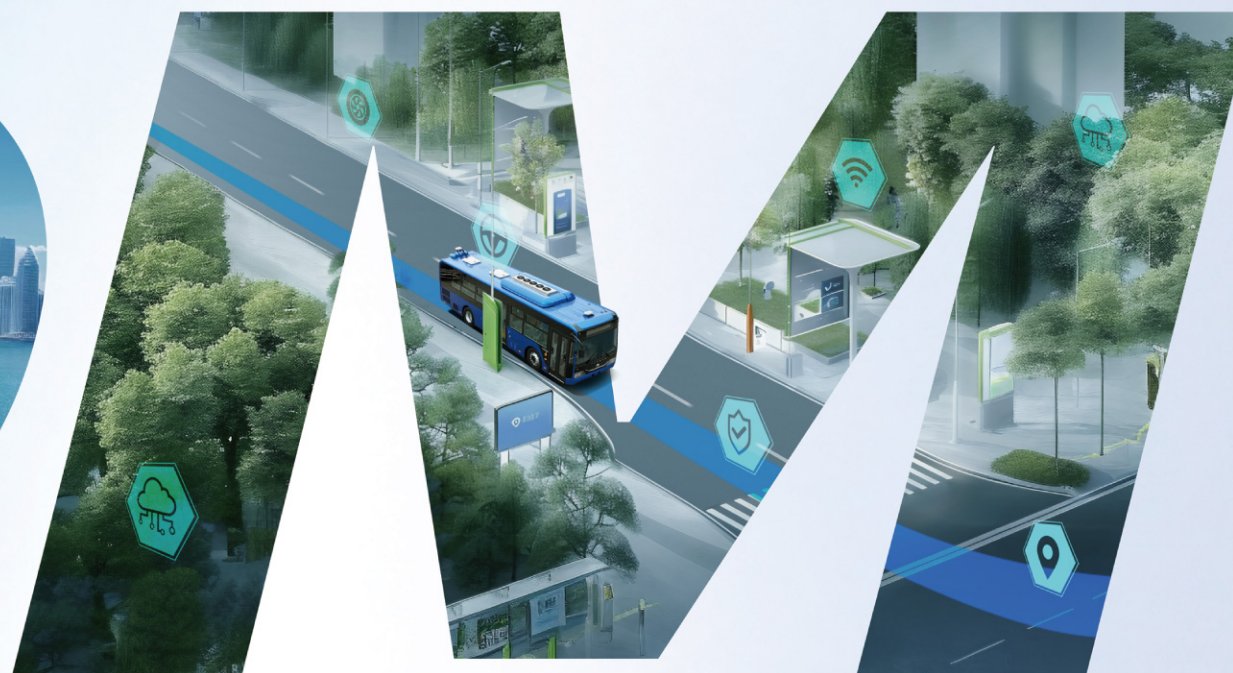
BRAND VISION

To become a global top-notch brand of new energy commercial vehicles, and open the new energy era of commercial vehicles with electric and intelligent technologies.

SOCIAL RESPONSIBILITY

Yutong adheres to the concept of green development and fulfills its social responsibilities. As an active practitioner in public mobility field, Yutong has sold 190,000 new energy vehicles cumulatively, reducing fuel consumption by about 9.1 billion liters, gas consumption by 1.4 billion m³ and carbon emission by about 26.88 million tons, equivalent to planting trees of 130,000 hectares. It has made significant contributions to reducing carbon emissions and promoting the green transformation of public mobility.

SUPER HYBRID SUPER ENERGY-SAVING



Energy efficiency

Reduce fuel consumption by more than 30%
More environmentally friendly, economical and reliable operation

Intelligence

Intelligent control of power system
Combined with IoV real-time vehicle monitoring, improving operational management

Safety

Supercapacitor has longer service life and lower failure rate
Less prone to deflagration and higher safety



30% less fuel consumption

The DMT hybrid system incorporates three key elements of intelligent powertrain control strategy, automatic braking energy recovery technology and 2nd-generation engine thermal management technology, to reduce the fuel consumption by more than 30% compared with traditional fuel vehicles, thus reducing environmental pollution and enhancing eco-friendliness.

Ultra-quiet

The pure electric start mode can effectively reduce the vibration and noise of engine starting. The NVH technology of complete vehicle can effectively isolate the driving noise from chassis and outside, providing passengers with a quieter and more comfortable riding space.

High safety

The super capacitor is of physical energy storage with more stable performance. It can be charged and discharged repeatedly in a fast manner without adverse effects.

Meanwhile, in combination with Yutong's unique robust closed-ring structure design and high-strength frame profile, the transmission effect of impact force is improved to ensure the safety of whole vehicle frame.

HYBRID TECHNOLOGY

The gearbox of DMT hybrid power system is canceled, and a new generation of high-efficiency and high-power density motors are developed, with dual motors coaxially arranged. The gearbox-free design reduces mechanical faults and has high reliability. The new generation motor has smaller volume and higher efficiency. The dual-motor series/parallel drive mode can realize multiple working modes.

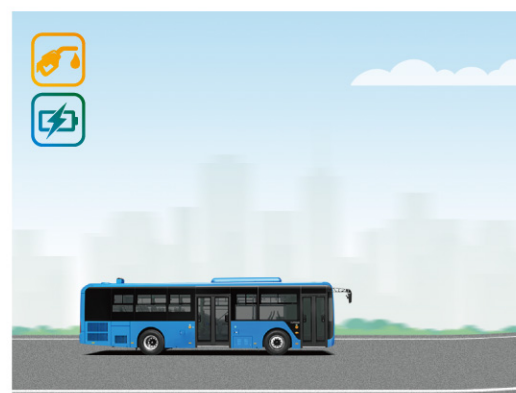


WORKING MODE



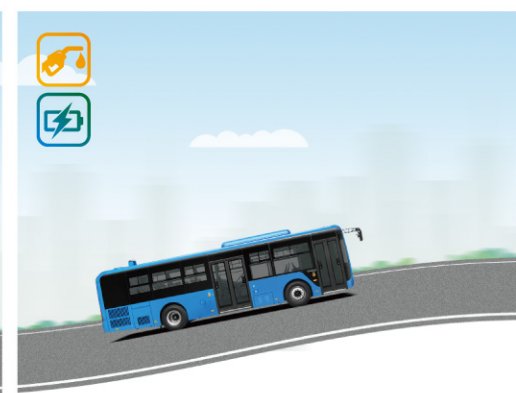
Starting

Pure electric mode is activated. The motor drives the vehicle and the engine does not work.



Low-speed creeping

The engine drives the generator to generate electricity, and the motor drives the vehicle to run.



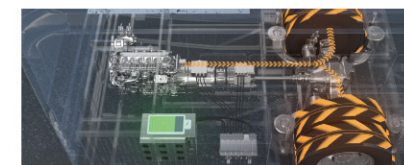
Climbing

The engine and the motor work together to drive the vehicle.



High-speed traveling

The engine drives the vehicle alone (with highest engine speed), and the motor does not work.



Downhill/braking

Pure electric mode is activated. The drive motor recovers energy to the traction battery.



TECHNICAL VALUE ADVANTAGE



Drive motor + ISG motor

- Dual-motor provides power for vehicle operation. The output torque is increased by 10%. With light weight and good heat dissipation, it adapts to extreme working conditions.
- Higher safety, stronger power and higher vehicle fuel saving rate are realized.



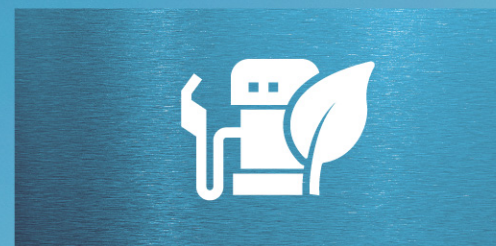
Integrated controller

- It integrates many high-efficiency components such as generator controller and steering controller, with lighter weight and higher compatibility.
- According to the actual working conditions, it can intelligently adjust the work strategy to realize the economy of vehicle operation.



Super capacitor

- The physical energy storage form can meet the requirements of high-power charging and discharging in a short time, with strong temperature adaptability (-40°C-60°C) and cycle life up to more than 1 million times.
- It is an ideal driving energy for hybrid buses with stable performance and higher safety.



High fuel saving ratio

The break-even balance between hybrid power and fuel is achieved by saving fuel costs, and the actual fuel saving rate of bus routes is 30%-50%.
Dual-motor operation: The high-efficiency working area of the engine is adjusted by the motor to reduce energy waste, thus reducing the comprehensive fuel consumption.



Less mechanical failure and higher reliability

The transmission is canceled to reduce mechanical loss.



Smooth power and excellent comfort

No gear shifting process, and higher driving comfort.



Adaption to various road conditions

Dual-motor series/parallel electromechanical coupling system, with flexible and variable driving modes to meet the needs of different roads and working conditions.

KEY COMPONENTS



INTELLIGENT CONNECTION

Vehicle+



Safety and security

- Accurate positioning facilitates real-time monitoring of vehicle trajectory.
- Backstage monitors the operation status of vehicle key parts in real time, and warns risks in advance.

Efficient operation

- The cloud platform analyzes vehicle charging data and outputs the optimal charging scheme to reduce operating costs.
- Big data generates power-saving guidance and suggestions for driving habits to reduce operational energy consumption.
- The line operation status can be retrieved from backstage and shifts can be intelligently arranged, improving work efficiency by more than 40%.



Convenient management

- Services like one-button reservation, rescue, parts inquiry and logistics tracking make management easier.
- Driver behavior analysis reports can be automatically retrieved from backstage, and improvement plans are provided for more efficient management.



PREMIUM SERVICE

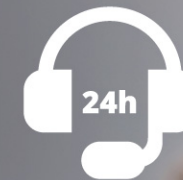
Worry-free after-sales service to enhance value

Yutong has been always refining its service modes, improving its service capabilities, and building a professional integrated service platform, so as to provide customers with more convenient and efficient high-quality service experience and meet diversified service needs.



Full-time new energy service team

Real one-stop service: attentive service team, addressing all doubts and providing maintenance solutions across all aspects.



7*24h attentive service

Delivery - Registration - Operation
7*24h all-round attentive service



Service + Training

Hierarchical, classified and targeted training for customers' drivers and management personnel free of charge, and training support throughout the full life cycle.



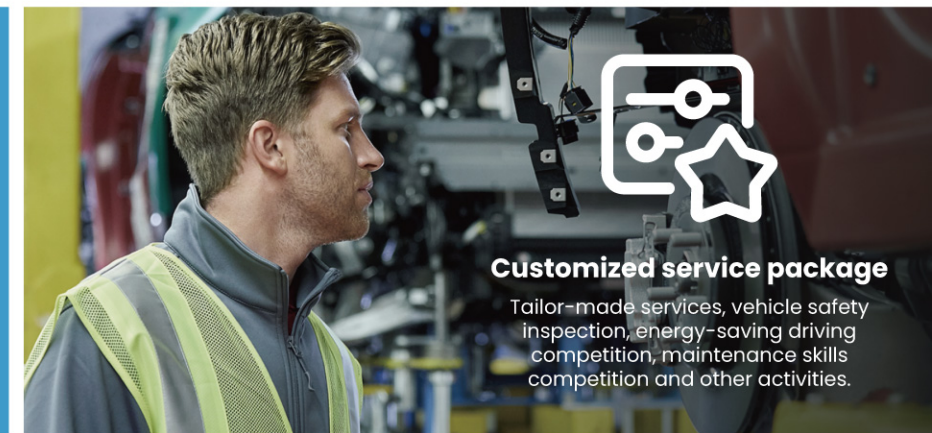
Nearby stationing, quick response

Stationed near the customer company or main operating routes to ensure rapid response.



Simplified structure, convenient maintenance

The whole front wall is of downturned structure, and the transmission is cancelled, so that the structure is simpler and maintenance convenience is improved.



Customized service package

Tailor-made services, vehicle safety inspection, energy-saving driving competition, maintenance skills competition and other activities.



FUEL-SAVING CHALLENGE



In the real city co-construction operation scenario, Yutong E10H runs for 100 km under full load and full fuel condition, passing through 110 traffic lights in the whole journey. The semi-congested roads truly simulate the operating road conditions of urban buses. The vehicle air conditioner works normally. When the bus returns to the same fuel station, the actual fuel consumption is recorded with the same nozzle. The fuel consumption test result is lower than the minimum fuel consumption of 40L/100KM in global markets. The challenge is passed perfectly!



PRODUCT PARAMETERS

Product model		H8	H10	H12
Basic parameters	Item	Configuration description		
	L×W×H (mm)	8940×2420×3140	10500×2550×3220	12170×2550×3220
	Max. speed (km/h)	70 (speed limit)	70	69
	Complete vehicle curb weight (kg)	9100	11200	11700
	Max. number of passengers (including driver)	61	80	87
	Wheelbase, front overhang/rear overhang (mm)	4350, 2000/2590	5100,2350/3050	6000,2740/3430
	Compartment interior height (mm)	2460 (front passage of middle door)/ 1820 (rear passage of middle door)	2470 (front passage of middle door)/ 1900 (rear passage of middle door)	>2200
	Min. turning diameter (m)	≤16	≤22	≤22
Engine Information	Front /rear axle (kg)	4700/8700	5800/11200	6500/11500
	Emission	Euro III/Euro V	Euro V/Euro VI	Euro III/Euro V/Euro VI
	Displacement (L)	4.156	6.234	6.234
	Model	YCS04 180	YCS06245	YCS06245
	Rated power (kW/rpm)	132/2300	180/2100	180/2100
Chassis	Powertrain	Hybrid	Diesel	Hybrid
	Power system	YCS04 180 engine + 8m DMT power system, 16 series super capacitors	YCS06245 Engine + DMT Power System	YCS06245 Engine + DMT Power System
	Axle	Front disc and rear disc (Molead)	Front disc and rear disc (Molead)	Front disc and rear disc (Molead)
	Brake safety system	EBS	EBS	EBS
	Suspension system	Airbag, independent front suspension	Airbag, independent front suspension	Airbag, independent front suspension
	Fuel tank	120L/160L	150L/170L	125+125L
	Thermal management	Engine thermal management system	Thermal management system	Thermal management system
A/C	Tire	265/70R19.5	295/80R22.5; 275/70R22.5 (optional)	Goodyear 295/80R22.5
	A/C	Cling 24000Kcal/h	Cling A/C (refrigerating capacity 32000Kcal/h, BOCK compressor)	Cling A/C (refrigerating capacity 38000/32000Kcal/h, BOCK compressor)
Seat	Number of seats + seat model	18 CS001 seats, 1 wheelchair area (2 flip seats)	25/27 CS001 non-padded seats, 1 wheelchair area (2 flip seats)	35 CS001 non-padded seats, 1 wheelchair area (2 flip seats)
	Driver seat	3-point airbag suspended driver seat	3-point airbag suspended driver seat	3-point airbag suspended driver seat