

NEW X-TRAIL FUEL CELL VEHICLE (FCV)

With its latest **X-TRAIL** fuel cell vehicle, Nissan has developed an FCV which matches the average gasoline-powered vehicle in terms of both cruising range and acceleration. Despite the significant technological challenges presented by using hydrogen, Nissan continues to enhance the practicality of FCVs.



Main features of the X-TRAIL FCV

Increased cruising range

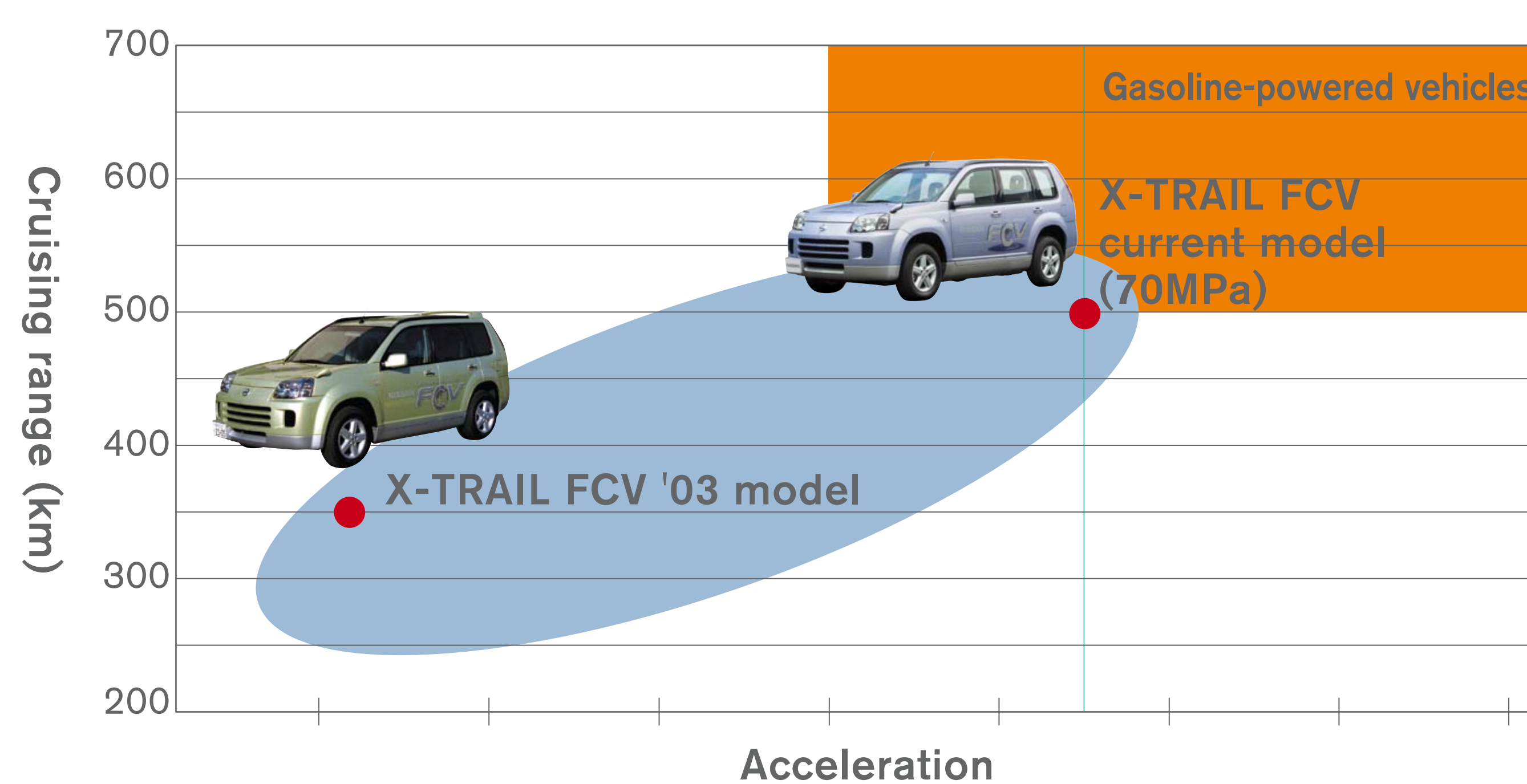
The hydrogen storage capacity of the latest FCV has been raised by 30% compared with the 2003 model thanks to the installation of 70MPa hydrogen cylinder. Together with improvements to the FCV's power plant, this has given the vehicle a cruising range of over 500 km, or 1.4 times that of the previous model.

Improved acceleration

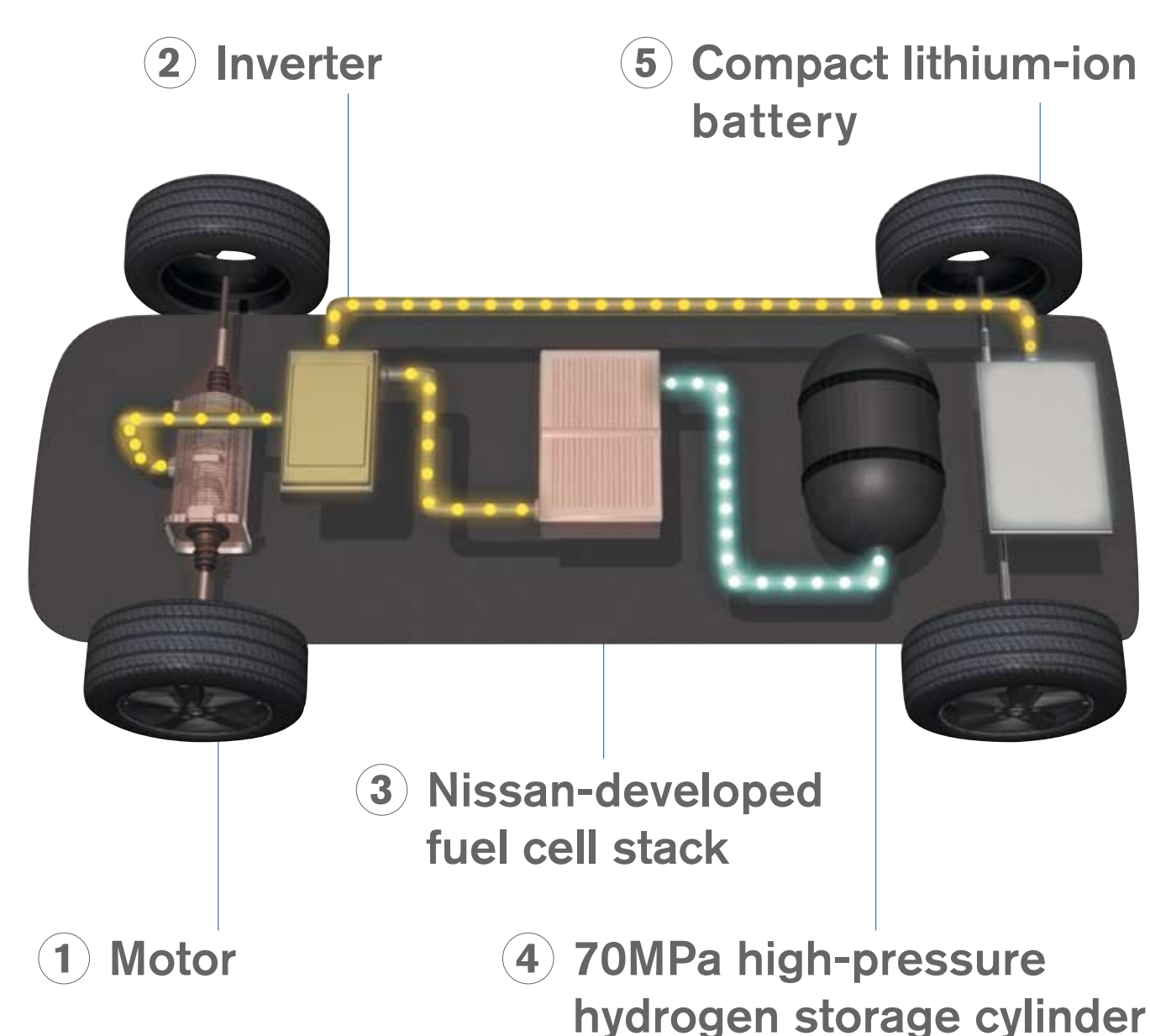
The new model features a Nissan-developed fuel cell stack that is more efficient than the previous stack. Maximum power is 90 kW compared with 63 kW in the 2003 model.

More luggage space

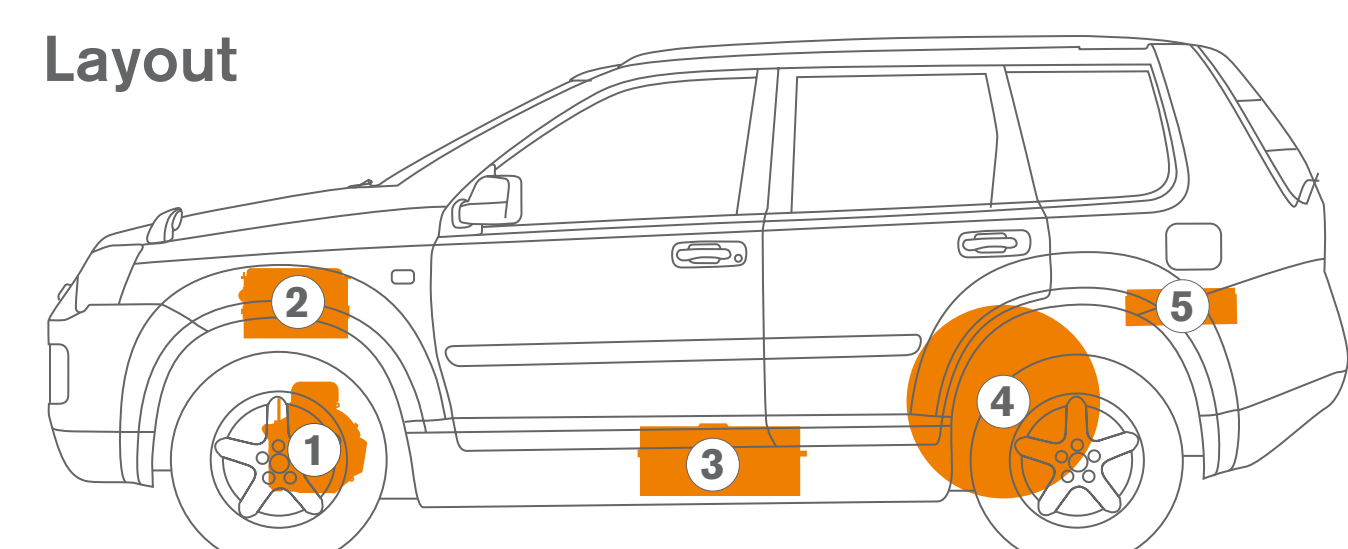
The luggage compartment has been lengthened by more than 400 mm by making the cylinder and fuel cell stack more compact and adjusting the position of the compact lithium-ion battery.



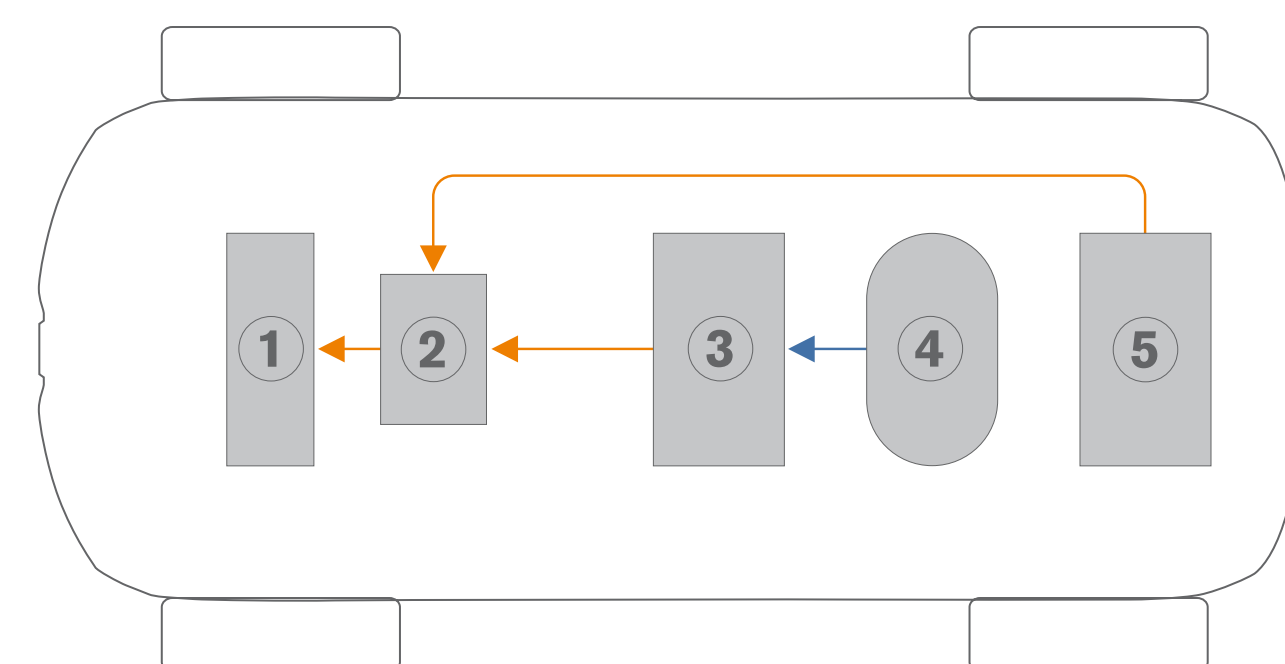
System overview



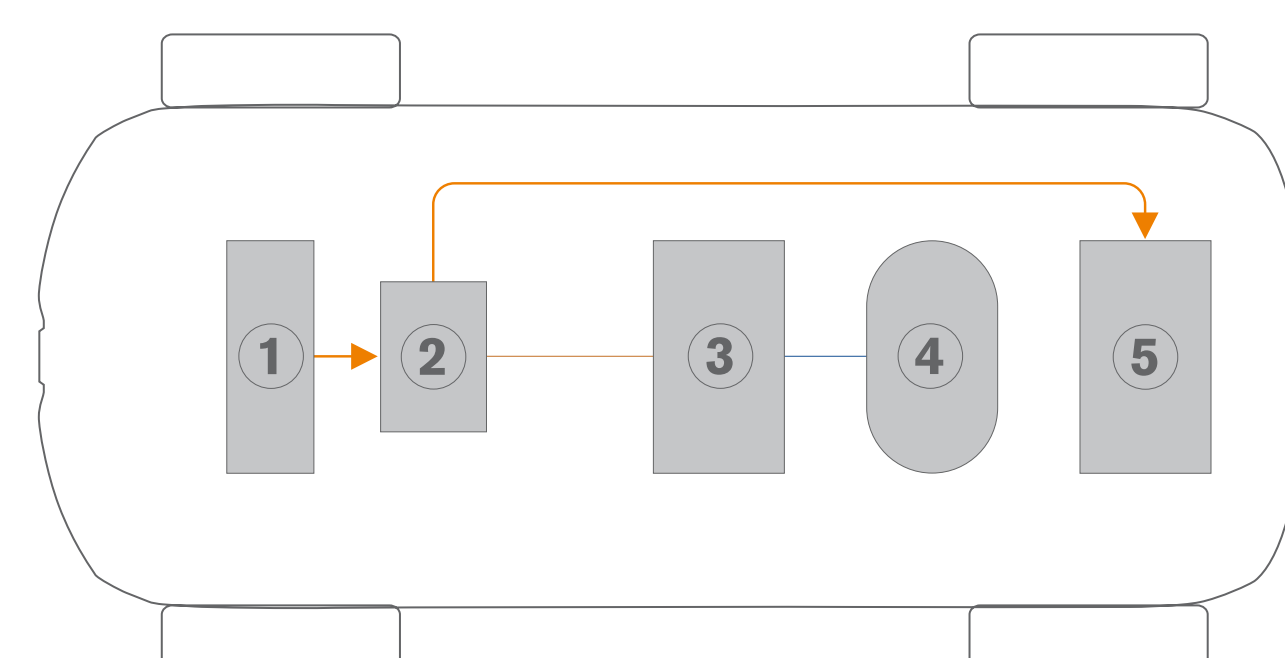
Layout



• Battery used as an auxiliary power source when accelerating



• Energy generated during deceleration, stored in battery



Specifications

		Current Model	2003 Model
Vehicle	Overall length/width/height (mm)	4485/1770/1745	4485/1770/1800
	Vehicle weight (kg)	1790(1860)	1960
	Seating capacity (people)	5	5
	Top speed (km/h)	150	145
	Cruising range (km)	Over 350 (over 500)	Over 350
Motor	Type	Coaxial motor integrated with reduction gear	Coaxial motor integrated with reduction gear
	Max. power (kW)	90	85
	Max. Torque (N·m)	280	280
Battery	Fuel cell	Polymer electrolyte	Polymer electrolyte
	Max. power (kW)	90	63
	Supplier	Developed by Nissan	UTC Fuel Cells (USA)
Fuel cell stack	Type	Compact Lithium-ion Battery	Compact Lithium-ion Battery
Fueling system	Fuel Type	Compressed hydrogen gas	Compressed hydrogen gas
	Max. pressure (MPa)	35(70)	35

Figures in parentheses refer to FCV equipped with 70MPa high-pressure, hydrogen storage cylinder.