

PART I	Electric bicycle specification	
General specs	Net Bicycle weight target (current)	<30 kg (31 kg)
	Max electric assistance Speed	25 km/hr
	Operating temp range	5-35C
	Operating RH range	20%-95%
Electrical system	Power source	36V integrated fuelcell power system
	Motor type	250W rated brushless hub motor
	LCD indicator on steering wheel	Voltage V, current A and stack temp C
Performance	Electric Drive Mode	Pedelec (1:1 pedal assisted)
	Driving range target (1:1 PAS) on single charge (optimal conditions)	250-300 km

Components	Frame	Al alloy (AA6061) with waterproof headset
	Suspension	front fork brand Zoom
	Brakes	Front and Rear disc-brakes
	Tires	26" x 1.75 Kenda tires with reflex straps
	Gears	Shimano, 6-speed
	Light	reflectors
	Seat	suspension seat post with soft saddle

PART II	Fuel cell and hydrogen storage specification	
FC Stack Characteristics	Type of fuel cell	PEM
	Number of cells	63
	Reactants	Hydrogen and Air
	Humidification	self-humidified
	Composition	99.99% dry H2
	H2 Pressure required	0.04-0.045Mpa(5.8psi-6.5psi)
	Rated power	300W
	Peak Power	350 W
	Rated voltage	36V
	Rated current	8.5A
	DC Voltage range	33V - 60 V
	Efficiency of stack	45% @ 300 W (36V, 8.5A)
	Cooling	Air (integrated cooling fan)
	Max stack temperature	65°C
Stack operating temperature	35-60°C	

FC System Characteristics	Weight (complete system including peripherals)	2.8 kg
	Casing dimensions	80*110*330 mm
	Expected # operating hours at rated power	750 hours
	Expected # start/stop cycles	750
	Start up time (stack protection mode)	10 to 15 sec depending on ambient temp

Hydrogen On Board Storage	System components	2 metal hydride canisters connected in parallel with quick connector
	Canister Dimensions	Ø60mm, L 330mm
	Canister Alloy	Alu alloy AA6061
	Filled Canister Weight target (current)	3.8 kg (2.6 kg)
	Quick connector	Titanium
	Pressure Regulator	reduction to 0.5 to 0.6 bar
	Normal operating pressure at 25°C ambient temp	< 5 bar
	Total Weight of Hydrogen Storage system	7.9 kg
	H2 liter content target (current)	1000L (700L)
	Net Energy Content target (current)	1200Wh (840Wh)
	Storage energy density target (current)	106 Wh/kg (190 Wh/kg)
cycle life target	500 cycles (50 cycles)	