

Different, Good.

YEBBUJANA

100% Full Electric Vehicle

YEBBUJANA *R2*



POWER PLAZA



YEBBUJANA *R2* Different, Good.

Future



SIDE VIEW CAMERA

Wide angle cameras are used instead of side mirrors to provide better views of the car's surrounding view.



TOUCH LCD & FOUR SIDE VIEW

Driver can control the vehicle information window and screen with patterns recognition.

Max. Range 765km

*Calculated

Energy 81kWh



Design



BLACK SHADE

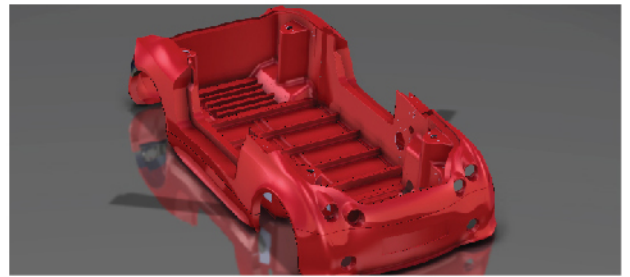
Elegance look



INNOVATE UNIQUE LINE

Front design is updated to the unique line based on dynamic the dolphin motive.

Simple



ONE-PIECE MONOCOQUE

Beautiful design and simple production.

Highlight *Calculated

Max. Speed 199km/h*

- Front Wheel Drive
- 5-Speed Manual Transmission

0 to 100km/h in 4.6sec.*

- Motor Power 80kW
- Light Weight 643kg

High Efficiency

- Highly Efficient PMSM
- Efficiency Of 9.2kWh/100km*

Charging

- Max. Charging Power 22kW
- Charging Time 1.8hour*



About us

POWERPLAZA, established in 1993, is leading the domestic industrial power supply (SMPS) market. In 2007, we have declared "Environment Friendly Management Policy," and secured technical skills for electric vehicles through the powertrain solution research and EV conversion based on the accumulated power electronics technology. Furthermore, we have developed reliable products and new technologies for electric vehicles by acquiring exclusive software and hardware.

Our Technology



3D Modeling & Simulation

Through high-tech 3D modeling and simulations, precise analyses and reliable prediction is achieved.

Product / System Designing

We design the total system of powertrains and vehicles, considering flaws that may occur.



Manufacturing

We have a complete system to manufacture 700 different types of power supply components. Based on this experience, we can achieve a mass production of new products.

Testing

Test equipments are arranged to enhance the vehicle's high performance with the optimized torque and the power.

YEBBUJANA series *Drawing the innocence of Electric Vehicle*

YEBBUJANA series, which means to 'Isn't she pretty' in Korean, is a compilation of POWERPLAZA's specialized technologies. It has attended both domestic and international electric vehicle exhibitions and competitions. Consequently, YEBBUJANA has contributed in increasing public awareness of the global environment issues and importance of electric vehicles in the near future.



YEBBUJANA 1
Zero Race Euro-Tour 2010



YEBBUJANA 2
Korean Guinness Record Challenge



YEBBUJANA S4
Seoul Motor Show 2013



YEBBUJANA S4
IAA 2013

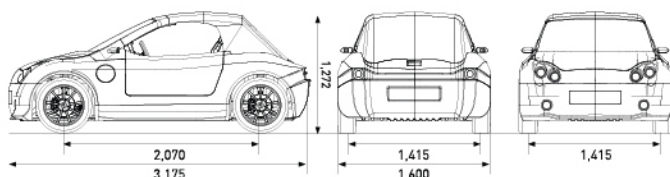


YEBBUJANA R
Seoul Motor Show 2015



YEBBUJANA R
IAA 2015

Technical Data



Performance

Range [km/@60km/h]*	440 765
Max. Speed [km/h]*	199
Acceleration [sec./0>100km/h]*	4.6 5.09
Energy Consumption (kWh/100km)*	9.2 10.59

Dimensions

Length / Width / Height [mm]	3,175 / 1,600 / 1,272
Wheelbase [mm]	2,070
Tread Front / Rear [mm]	1,415 / 1,415
Gross Weight [kg]	643 837

Motor

Motor Type	PMSM
Max. Output [kW(ps)/rpm]	80(109) / 4,000
Max. Torque [kgf.m/rpm]	19.4 / 4,000

Battery

Battery Type	Lithium-ion
Energy [kWh]	40.5 81
Charging Time [h]*	1.8 3.6 Inlet IEC 62196-2 "Type2"

Chassis

Transmission	5-Speed Manual
Brake [Front/Rear]	Disc Brake / Disc Brake
Suspension	Macpherson Strut Type
Tire	195 / 40r17

※Standard | **Optional Battery Equipped** *Calculated



Peace Electric Vehicle <0.5ton>

*Producing

Performance	Range [km]	100
	Max. Speed [km/h]	95
	Capacity [person]	2
Dimensions	Length [mm]	3,495
	Width [mm]	1,400
	Height [mm]	1,800
	Wheelbase [mm]	1,840
	Weight [including battery/kg]	830
	Loading Capacity [kg]	500
Motor	Motor Type	Induction Motor
	Max. Output [kW]	26
	Max. Torque [Nm]	108
Battery	Battery Type	Lithium-ion
	Battery Capacity [kWh]	17.8 kWh [80.3V / 222.6Ah]
	Charging Time [h]	4
Etc.	Heating System	PTC Heater

Peace Electric Vehicle Eco <1ton>

*Production Schedule

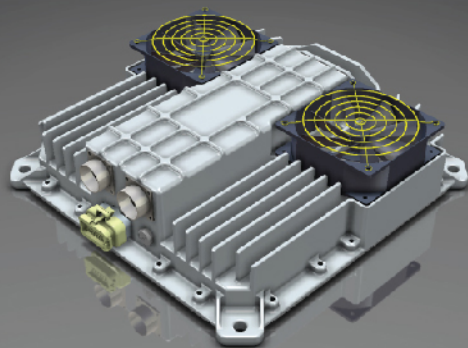
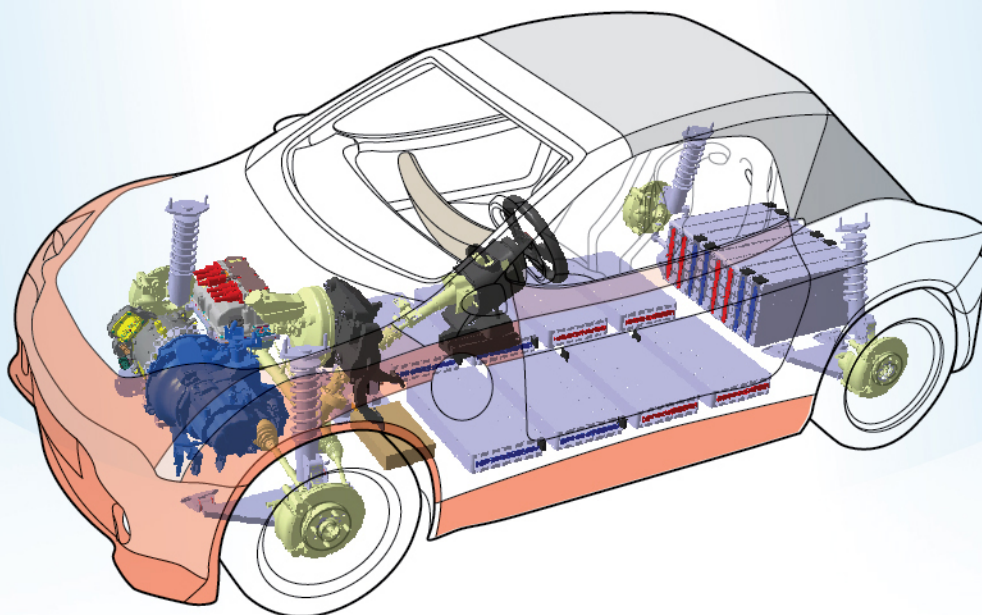
Performance	Range(One-Charger) [km]	100
	Max. Speed [km/h]	120
	Capacity [person]	3
Dimensions	Length [mm]	5,125
	Width [mm]	1,740
	Height [mm]	1,995
	Wheelbase [mm]	2,615
	Weight [including battery/kg]	1,880
	Loading Capacity [kg]	1,000
Motor	Motor Type	Induction Motor
	Max. Output [kW]	40
	Max. Torque [Nm]	196.13
Battery	Battery Type	Lithium-ion
	Battery Capacity [kWh]	31.7
	Charging Time [h]	5.5
Etc.	Air conditioning	AC/Heater

Peace Electric Vehicle High <1ton>

*Production Schedule

Performance	Range(One-Charger) [km]	144
	Max. Speed [km/h]	152
	Capacity [person]	3
Dimensions	Length [mm]	5,125
	Width [mm]	1,740
	Height [mm]	1,995
	Wheelbase [mm]	2,615
	Weight [including battery/kg]	2,030
	Loading Capacity [kg]	1,000
Motor	Motor Type	PMSM
	Max. Output [kW]	100
	Max. Torque [Nm]	294.2
Battery	Battery Type	Lithium-ion
	Battery Capacity [kWh]	54
	Charging Time [h]	9
Etc.	Air conditioning	AC/Heater

POWERPLAZA's EV Components



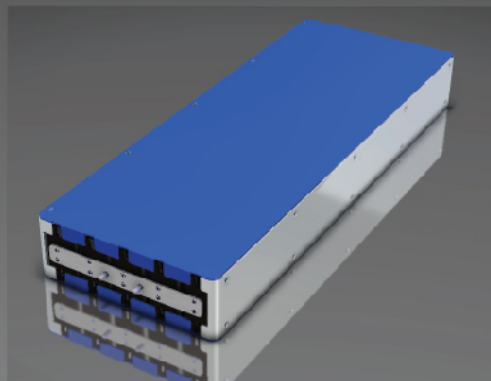
*Preliminary

On Board Chager EPC6000

- 6kW Output
- Universal AC Input
- Built-In PFC Function $PF > 0.99$
- High Efficiency 90~94%
- Environmental Protection IP65
- CAN Interface
- 356*374*126.5 (mm)

Battery Module LBLI 110V / 32A

. Energy(kWh)	3.52
. Max. Discharge Current(A)	100
. Max. Charge Current(A)	31 (1.0C)
. Cycle(90%DOD)	1,000
. Operating Temperature(°C)	-20~60
. Dimension(L*W*H) (mm)	600*215.4*72



POWERPLAZA's EV Components



On Board Charger EPC1800

- 1.8kW Output
- Universal AC Input
- Built-In PFC Function PF>0.99
- High Efficiency 90~93%
- Environmental Protection IP65
- CAN Interface
- 284*174.8*100 (L*W*H)(mm)



Low Voltage DC-DC Converter

- 600W Output
- High Efficiency 92%
- Low Profile
- Constant Current Control
- Constant Voltage Control
- Remote On/Off
- Parallel Operation



Power Distribution Unit

- CAN 2.0B Interface
- Key Status Check
- Main Relay On/Off Control
- Inverter Pre-Charge Control
- Discharge Control



Battery Management System

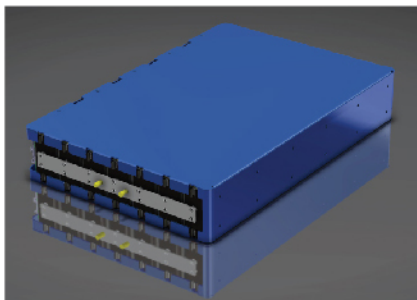
- CAN 2.0B Interface
- Estimation SoC from a Amp-Hour counter with a Voltage Based Correction
- Temperature Measurement
- Fault Management



Vehicle Control Unit

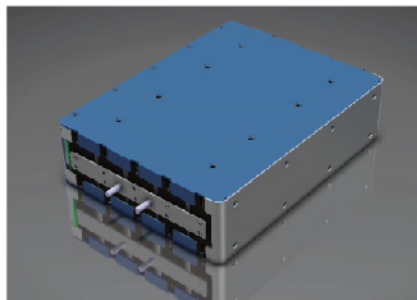
- Can 2.0B and Rs232c Interface
- Motor Controller
- Dual Potentiometer Based Accelerator Pedals
- Can Bus Based On Accelerator Input
- Relay / Contactor Driver
- Digital Output

Lithium-ion Battery Module



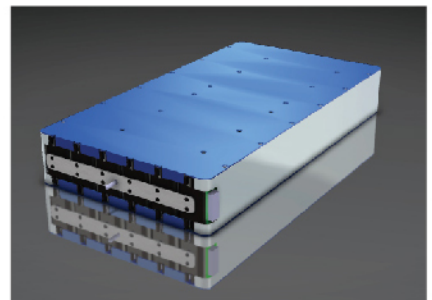
LBLI 81V / 45A

. Energy(kWh)	3.62
. Max. Discharge Current(A)	140
. Max. Charge Current(A)	43.4 (1.0C)
. Cycle(90%DOD)	1,000
. Operating Temperature(°C)	-20~60
. Dimension(L*W*H) (mm)	463.8*292.5*73.8



LBLI 51V / 32A

. Energy(kWh)	1.64
. Max. Discharge Current(A)	100
. Max. Charge Current(A)	31 (1.0C)
. Cycle(90%DOD)	1,000
. Operating Temperature(°C)	-20~60
. Dimension(L*W*H) (mm)	300*217*73



LBLI 88V / 38A

. Energy(kWh)	3.38
. Max. Discharge Current(A)	120
. Max. Charge Current(A)	37.2 (1.0C)
. Cycle(90%DOD)	1,000
. Operating Temperature(°C)	-20~60
. Dimension(L*W *H) (mm)	521.5*259*72



F.A.Q.

1. Is there other EV options?

Beside YEBBUJANA series, we have a collection of converted electric powertrain trucks, including Peace 0.5t Light Duty Truck, Peace 1t Eco, and 1ton High. Currently, Peace 0.5t Light Duty Truck is driving on the road of South Korea, and Peace 1t will be commercialized in the near future.

2. What is the one-piece monocoque?

The one-piece monocoque is a structure which the external skin supports load of the vehicle. We have developed it with our unique technique, and patented in 2014. This is crucial especially for EV since not only it reduces the vehicle's weight, but also simplifies the manufacturing process enormously.

3. What is the difference between the standard fast charging and YB's charging method?

Standard DC fast charging uses DC power from charging stations. Therefore, it makes challenge when the vehicle has to be charged at the location where the fast charging stations are not installed. Also, it requires a lot of time and resources to install power lines for the stations. However, POWERPLAZA's fast charging method uses power lines that are already installed within any building and charge through the standard 3 phase. This method offers much faster and convenient charging solution. Furthermore, YEBBUJANA can be charged by 220V single phase which can be found in regular houses.

4. Wouldn't side view cameras be unfamiliar and cause confusion to the drivers?

Typical example in the past would be rear-view mirrors. Previously, drivers made decisions with the rear-view mirrors during parking, but it is common to use parking assistance cameras nowadays. Side-view cameras may be unfamiliar, but they will have more advantages in the future as the technology develops. Side cameras can detect blind spots better than mirrors and offer views of the car's surroundings by using wide angled vision.

POWERPLAZA | (주) 파워프라자

#1401, 648 Seobusaet-gil, Geumcheon-gu, Seoul, South Korea
Tel. +82-2-855-4955 / Fax. +82-2-855-4954 www.powerplaza.com