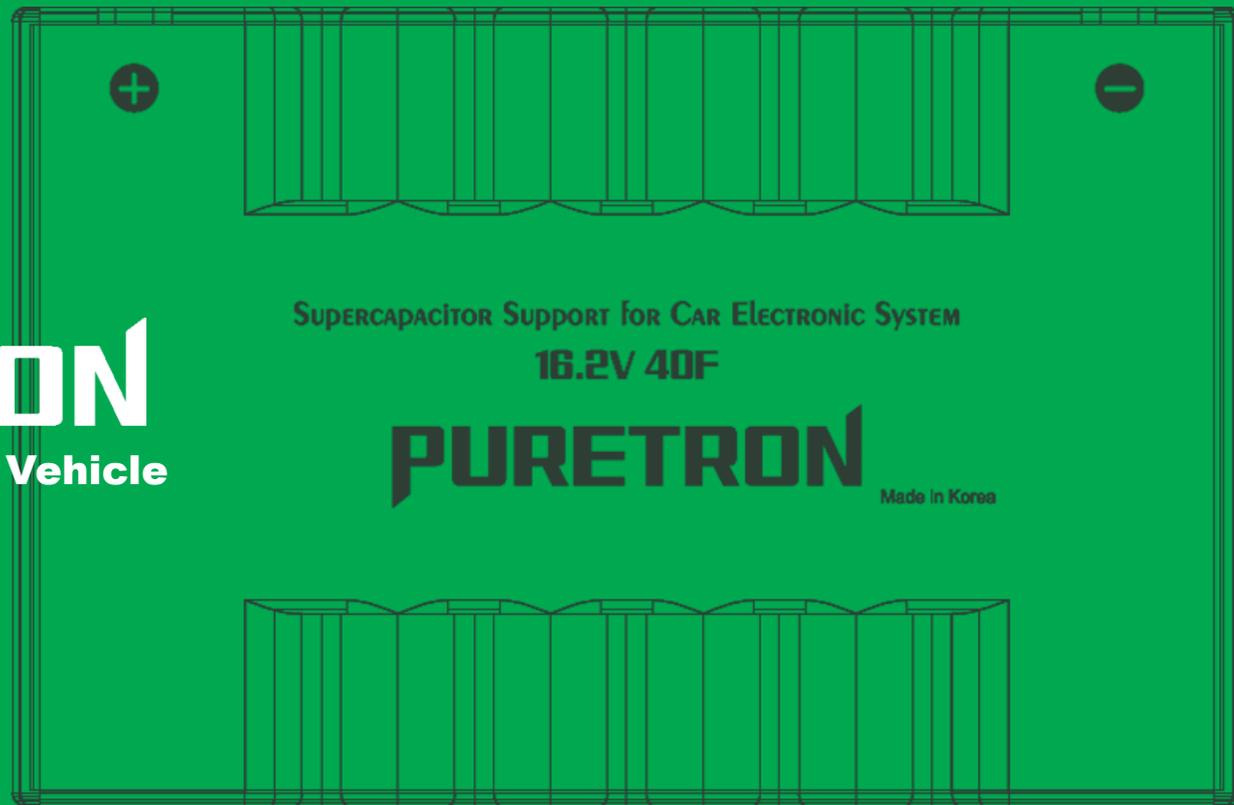


# PURETRON

Voltage Stabilizer for Vehicle



# Why You Need a Voltage Stabilizer for Your Car



Degradation in winter



Old battery



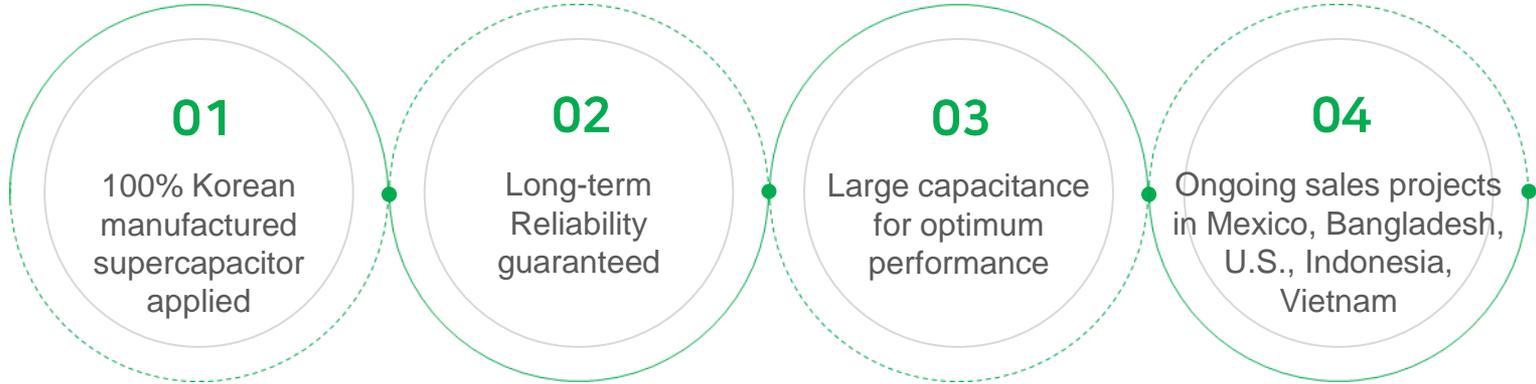
**Additional power source needed  
for a normal start-up**

It takes about 50 to 250A of current to start a passenger car and 100 to 500A for a commercial vehicle. A brand new, fully charged battery with the capacity of 40 to 120 Ah can instantaneously deliver from 340 to 900A depending on its capacity.

However, when the car battery is old or in the cold weather, the instantaneous output drops to 300~400 A due to the deterioration of battery characteristics, thus in need of an additional power unit 100 to 200A for a normal start-up.

PURETRON helps enable the engine of your car to have lowered electrical noise and provide a stable power supply for internal electric devices so that you can enjoy a quiet and comfortable driving. PURETRON can compensate for power loss when the engine is overloaded and fails to properly power the vehicle. It is a real difference-maker in terms of long-term performance and allows car batteries to keep providing the maximum amount of amperage for the maximum amount of time.

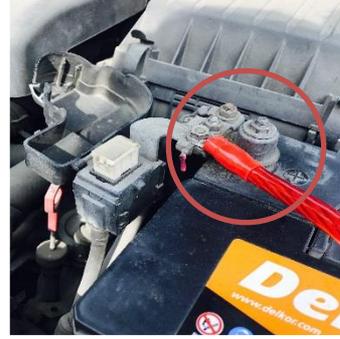
# Designed & Developed by Pureechem



- ✓ PURETRON is a supercapacitor module developed and manufactured for automotive by Pureechem, a specialist manufacturer of supercapacitors in Korea. It is a reliable product that guarantees long-term reliability, and now has a good response from the overseas market such as China, India, Mexico, and the USA. It helps you get the most out of your car by supplying power and optimizing the performance of your car.



# How To Install



## Before Installation

Park your car at a safe place and make sure to turn off the engine. Open the hood of your car and check if there is enough room near the car battery for installation.

## Device Attachment

Put the tape on the bottom of the device and make it firmly fixed on the car battery. Before fixing, make sure to remove dust on the surface of the car battery for good adhesion.

## Terminal Connection

Wearing protective gloves, connect the red cable of PURETRON to the (+) terminal of the car battery and then the black cable to the (-) terminal of the car battery.

*CAUTION. There may be sparks caused upon connecting the wire, but it is normal, not a defect.*

# Application Case



○ H brand

○○ H brand



○○○ K brand, hybrid car



# Model



## PURETRON 100F

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Recommended for SUV or small truck  
300A of max. power output  
Reportedly effective in torque increase when applied to medium- and large-sized motorcycle



## PURETRON 40F

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Recommended for medium-sized sedan of 3,000CC and below  
Applicable for all types of vehicle



## PURETRON 20F

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For motorcycle  
Recommended for small-sized cars of 1,000CC and below or for motorcycle



# Specification

Model	Size	Weight	Input Voltage	Input Current	Max. Peak Current	Temperature
16.2 V 20 F	174*63*33 mm	450 g	1~16 V	1~80 A	80 A	-40~60 °C
16.2 V 40 F	180*118*33 mm	720 g	1~16 V	1~150 A	150 A	-40~60 °C
16.8 V 100 F	280*88*43 mm	1300 g	1~16 V	1~300 A	300 A	-40~60 °C

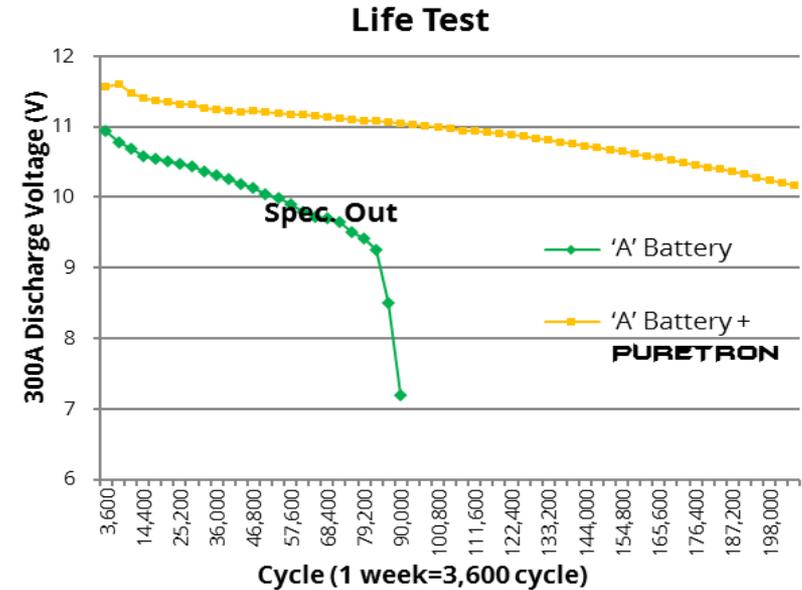
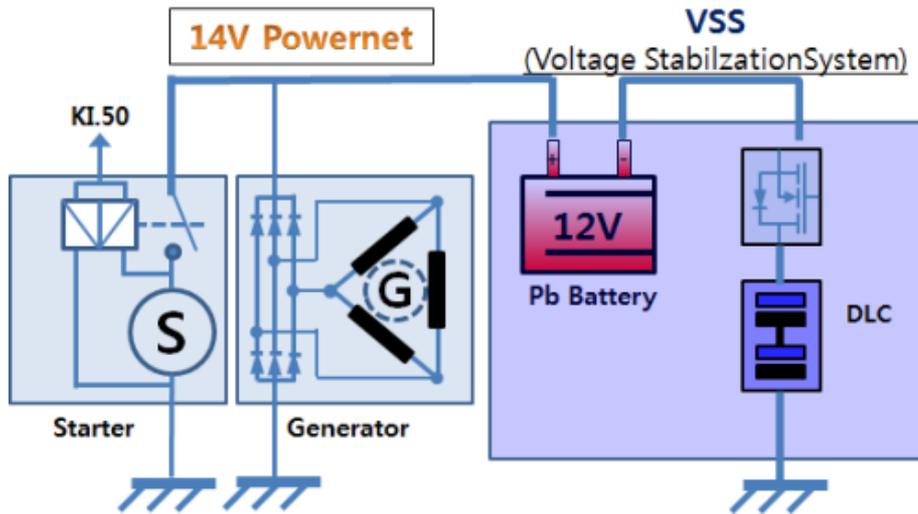
# Performances

01

## Battery Life Extension

The life of the battery more than twice as long!

The supercapacitor VSS compensates for the power consumption of the Pb battery when the engine is restarted (approx. 200-300A for passenger cars, 1 ~ 3sec), thereby preventing deterioration of the Pb battery (IR drop, overcharging) and improving service life.



# Performances

02

## Fuel Efficiency Improvement

Reportedly savings of 5-10%!

Our customers have said that PURETRON has helped reduce fuel consumption for idling stops and restarts of the vehicle, and improved the vehicle's output, resulting in a fuel economy improvement of about 5-10%.

03

## Power Supply Stabilization

Stable power supply to vehicle's electrical parts

The configuration of the supercapacitor VSS in parallel with the Pb battery maintains the voltage of the Pb battery at the time of the engine restart at 10 V or more. This ensures the stability of the electrical component as the voltage is increased.

04

## Cold Startability Improvement

Average 200CCA increase after installation!

The output characteristics of the Pb battery deteriorate at low temperatures as in winter. In contrast, the supercapacitor VSS performs exceptionally well at temperatures as low as  $-30^{\circ}\text{C}$ , providing cold cranking in the engine and making cold starts easier in the wintertime.



# Features



01

## Engine Performance Restoration

Low resistance and high power supercapacitors help to restore initial engine torque lost over time.

02

## Battery Life Extension

Supercapacitors help to reduce the amount of current stress imposed on car battery and extend its life about 150% or more.

03

## Gear-shifting Improvement

Stabilized power supply enables soft and smooth speed-change and fast gear-shifting.

04

## Audio Quality Improvement

Stable supply of electricity removes current noise and contributes to better sound quality.

05

## Engine Start-up Improvement

PURETRON compensates power shortage that an overloaded generator cannot afford to meet.

06

## Better Fuel Efficiency

PURETRON speeds up a car's internal electrical reaction and helps complete combustion of fuel.

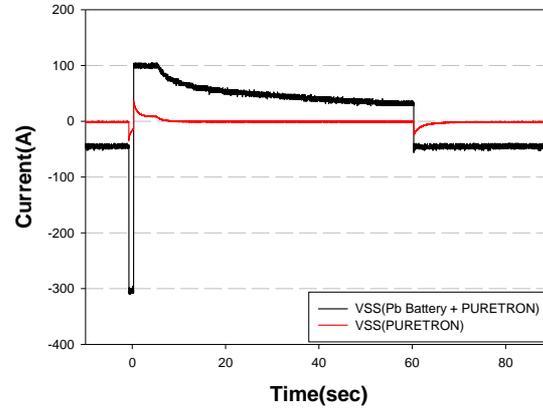
07

## Battery Voltage Stabilization

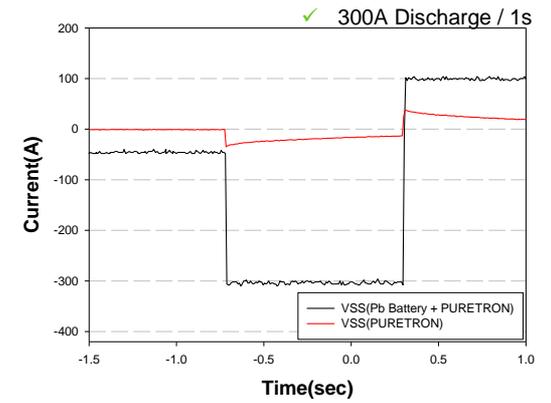
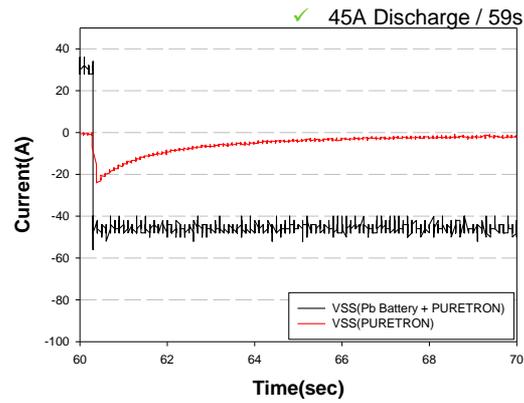
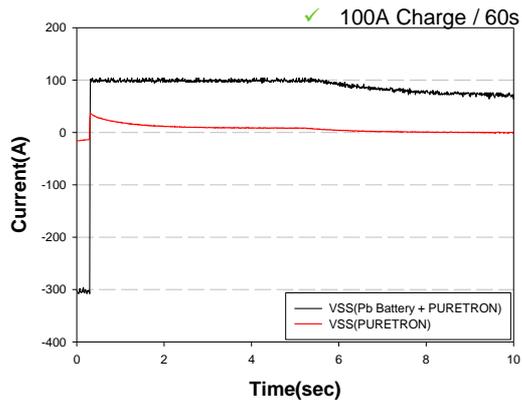
Supercapacitors help to rectify ripple current and maintain good quality of electricity.



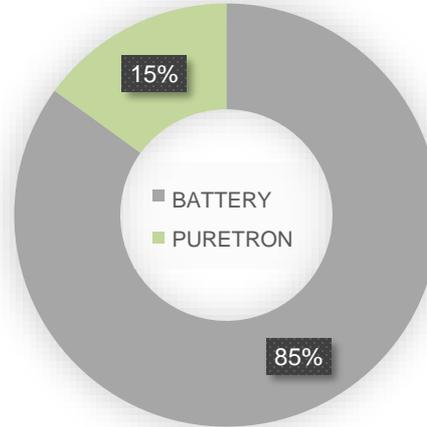
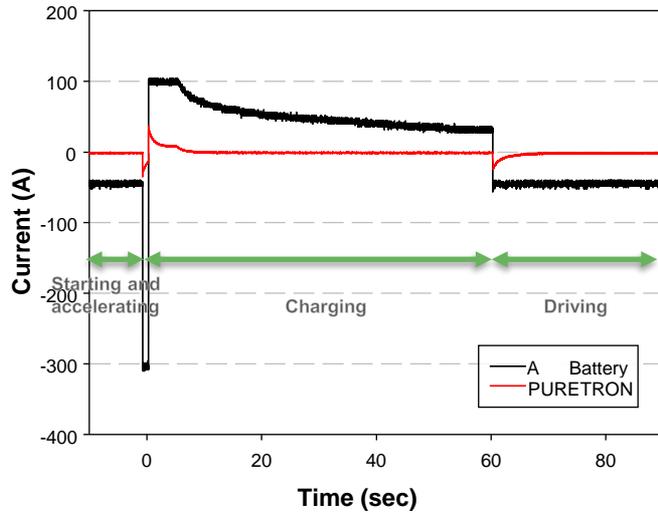
# 300A Discharge Load



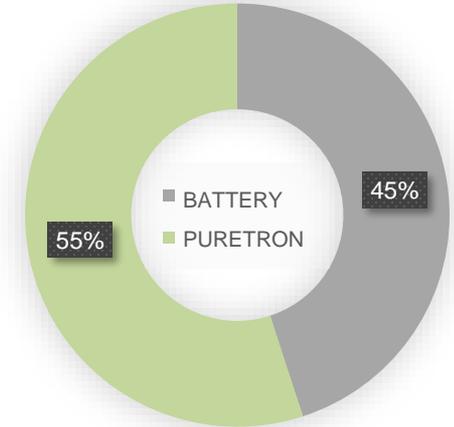
- Discharge 300A for 1 sec
- 1. When Pb battery solely used: 300A
- 2. When used with PURETRON:  
255A from Pb battery + 45A from PURETRON



# Current Re-distribution



- ✓ While starting and accelerating PURETRON relieves 15% of current stress of the battery,
  - Battery life doubles
  - Engine starting improves



- ✓ While driving PURETRON improves 55% of current stress imposed on the car battery, which will show a significant effect in noise reduction.
  - This optimizes electrical performance of car devices (better sound quality and more smooth gear shift)

Innovative  
Technology  
Leader



PUREEChem



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