

STOP START

STARTERS AND ALTERNATORS

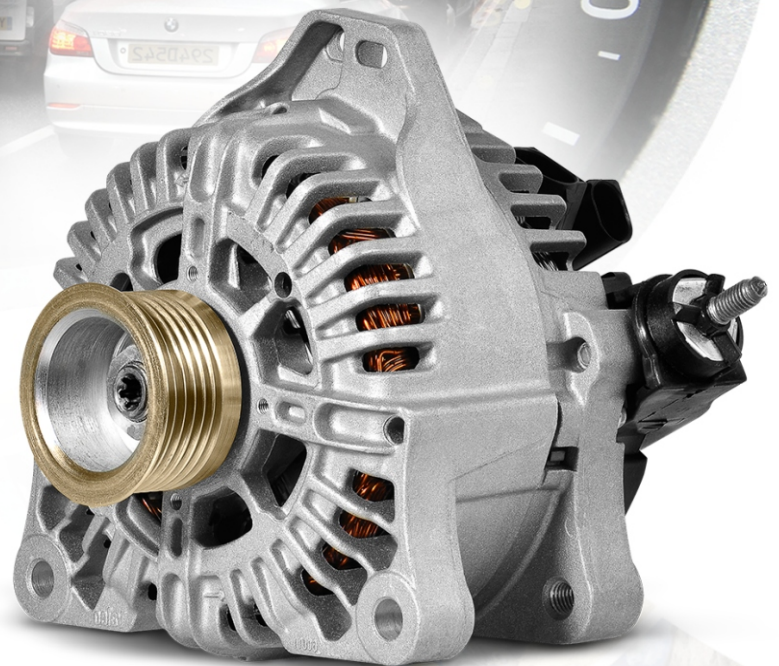


the future of Ro

Universal have one
of the largest
ranges of **Stop/Start**
products available
in the **UK** today.

Major VM 'Eco' Branding Vehicle ranges utilising Stop/Start technology

BMW - Efficient dynamics
Citroën - Airdream
Ford - ECOnetic
Mercedes-Benz - BlueEFFICIENCY
Mitsubishi - ClearTec
Nissan - PURE DRIVE
Peugeot - Blue Lion
Proton - ecoLogic (GEN-2 LPG)
Renault - Eco2
Saab - BioPower
Seat - Ecomotive
Škoda - GreenLine
Toyota - Optimal Drive
Vauxhall - ecoFLEX
Volkswagen - BlueMotion
Volvo - DRIVE

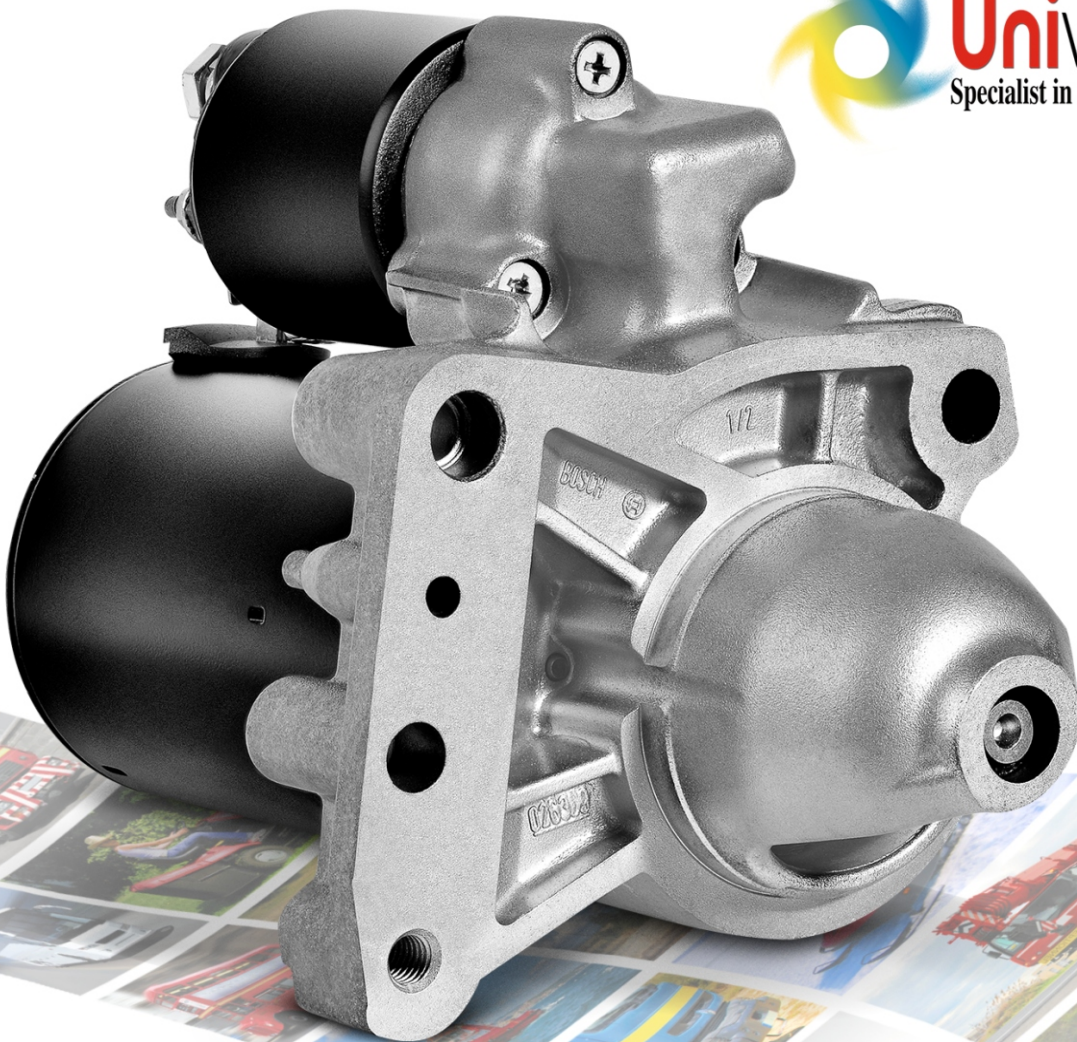


**All units are specially
developed to cope with
the extra demands of
stop/start technology**

Rotating Electrics

STOP START

Starters and Alternators developed and remanufactured by Universal at our UK factory. Universal have invested in the latest testing equipment to aid our research and development on Stop/Start vehicles. We are able to test against OE data, so we can map our products functions against the vehicles OE protocol. With over 145 different alternator plug connectors now available and our extensive database of information, we will ensure that we always supply the correct part for the correct vehicle.



STOP START

STARTERS AND ALTERNATORS

Q Why do VMs (Vehicle Manufacturers) use Stop/Start technology?

A Legislation, to reduce CO2 emissions is being enforced across Europe. One way to reduce emissions is to reduce fuel consumption - research shows the use of Stop/Start technology achieves this by around 5% and up to 8%.

Q When was Stop/Start technology introduced?

A In 2007, BMW was one of the first VMs to launch Stop/Start on their 1 Series diesel engine, now very popular with drivers.

Q How many vehicles currently have Stop/Start installed?

A Research suggests currently 8.8 million vehicles, worldwide, with estimates suggesting an increase to 55.4 million vehicles by 2022.



Stop/Start is estimated to be 70% of the European market by 2015. Starter motors & alternators have been developed to cope with the extra demands of Stop/Start, but starter motors particularly experience significantly shortened lifespans.

Q Do different VMs have different names for Stop/Start technology?

A VMs brand their ecological vehicle ranges on which Stop/Start is featured - examples are given inside.

Q Are Stop/Start starter motors & alternators different to non Stop/Start ?

A Stop/Start starter motors have a higher kW output rating and more brushes to prolong their life span, in addition to increased torque.

Depending on the OE manufacturer some alternators have different regulator functions. A non Stop/Start product on a Stop/Start car may not function correctly and will fail over time!

Q Do Universal remanufacture Stop/Start products?

A Investment in the latest computerised testing equipment enables us to remanufacture and we source OE component parts to keep up with this constantly evolving technology. A dramatic rise in requests for Stop/Start products over the last year sees us now stocking an extensive range of remanufactured Stop/Start products off-the shelf for immediate delivery.

Q What is Universal's view of Stop/Start technology?

A Stop/Start is the future of Rotating Electrics. With VMs forced to comply with legislation, and constant demand for improved fuel consumption, Stop/Start will only increase over coming years.

