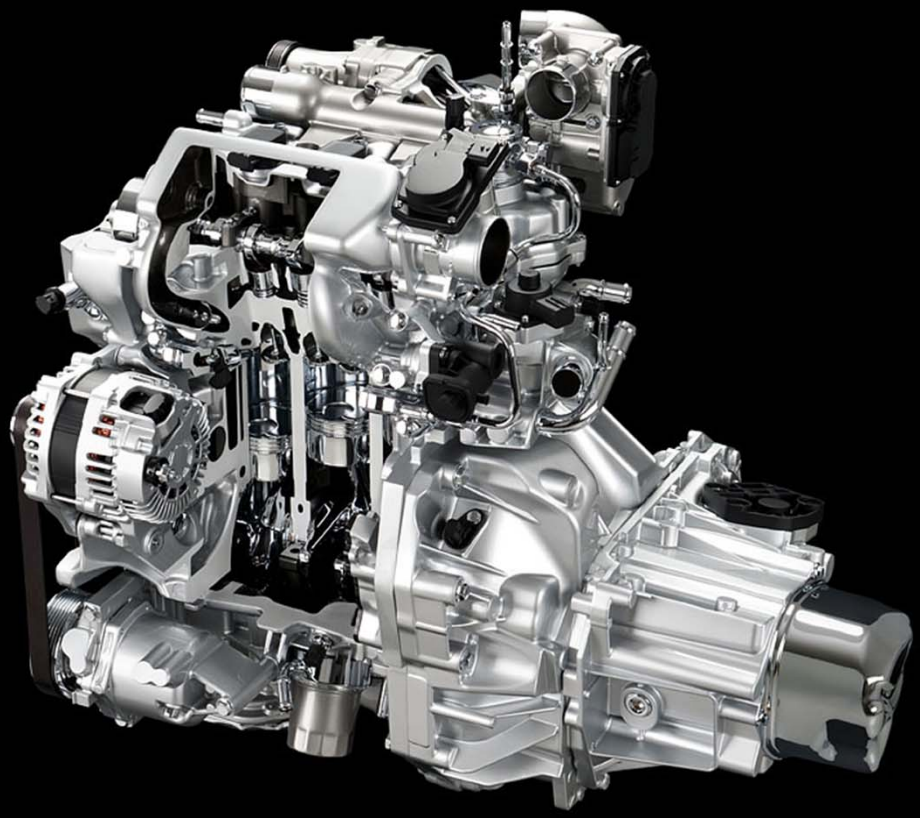
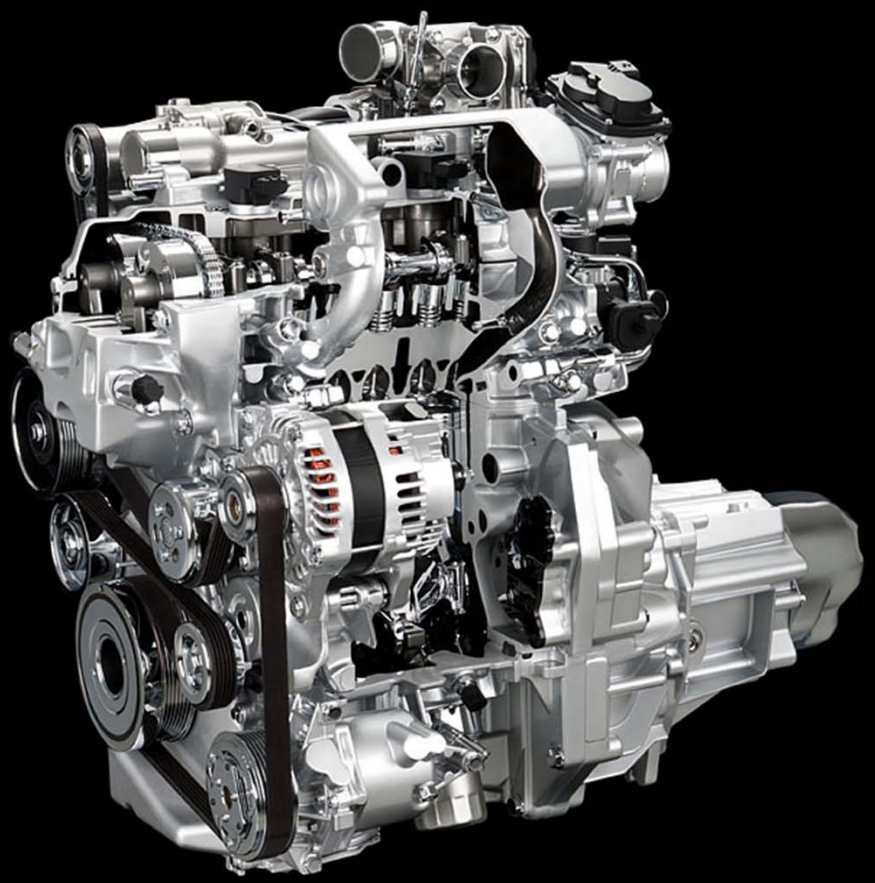
NISSAN MICRA DIG-S

AN ENGINE FOR A CLEANER FUTURE



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NISSAN'S HOLISTIC APPROACH TO LOW CO_2 EMISSION LEADERSHIP

In 2020, total industry mix is estimated to be 10% Electric Vehicles (EV) and 90% Internal Combustion Engine (ICE) Vehicles.

Zero Emission and **PURE DRIVE** are the communication benchmarks for sustainable mobility in our mission to reduce CO_2 emissions and fuel consumption.

PURE DRIVE BY NISSAN

"**PURE DRIVE** is the designation that Nissan gives to vehicles that exceed government standards for CO_2 or fuel consumption in their regional markets.

These vehicles use our most advanced technologies to provide customers with what we believe is an optimal balance of efficient fuel consumption, value, and performance."

Carlos Ghosn CEO Statement
Shareholder Meeting (July 2010)

PURE DRIVE STRATEGY

2010 : 40% of Nissan range met Pure Drive criteria < 140g
2012 : 50% of Nissan range will meet Pure Drive criteria < 130g
2014 : 60% of Nissan range will meet Pure Drive criteria < 120g

European Corporate CO_2 average Nissan-Infiniti

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PURE DRIVE TECHNOLOGIES

IMPROVING WEIGHT REDUCTION TECHNOLOGY

- Lighter Platform / Lighter parts

IMPROVING AERODYNAMICS

- Optimised aerodynamics

IMPROVING ENGINE TECHNOLOGY

- Engine Downsizing with Supercharging or Turbo charging

- Direct Injection

- Low viscosity engine oil

- Optimised gear ratios

- Improved thermal management

- Engine friction reduction

- Improved combustion efficiency

- Twin VTC

- Twin injectors per cylinder

IMPROVING ELECTRICAL COMPONENTS

- Regenerative alternator

- Auto Stop/Start technology

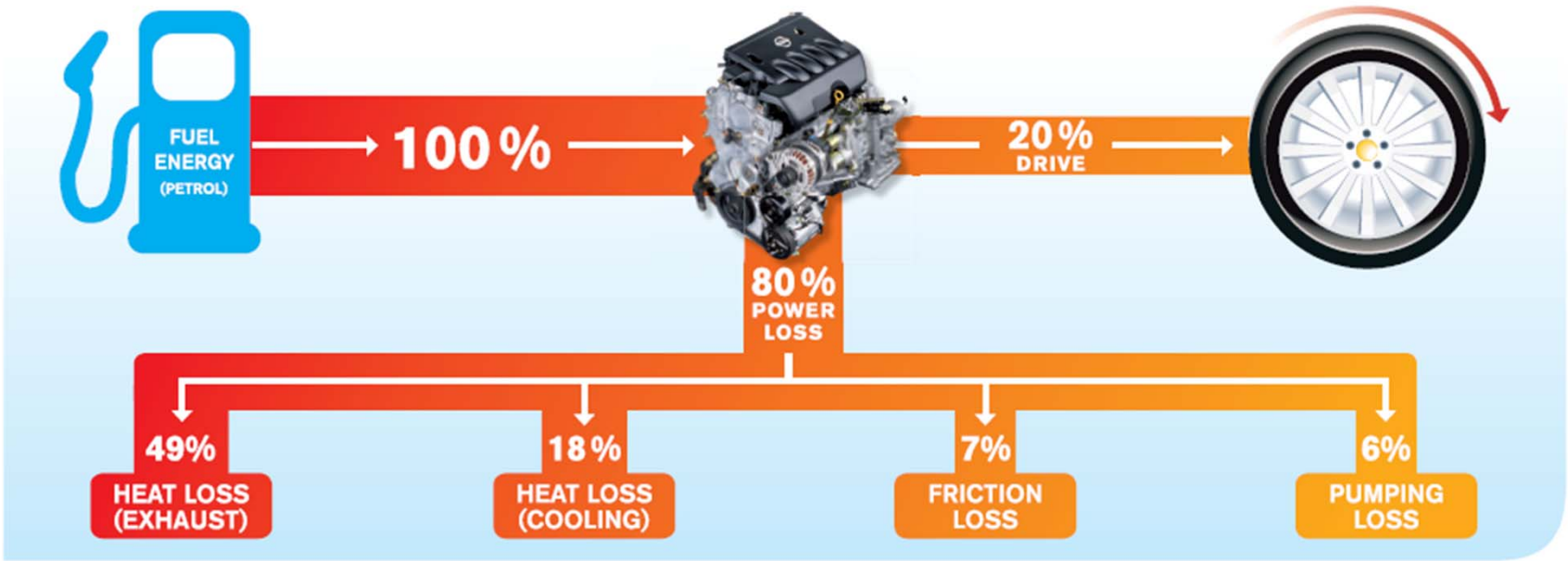
- LED Stop Lamp

OTHERS

- Low rolling resistance tires

TECHNOLOGIES USED ON MICRA DIG-S

ENGINE EFFICIENCY IMPROVEMENT



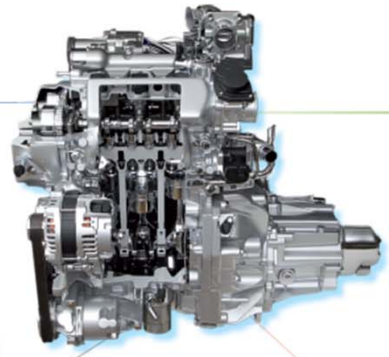
- A typical engine will convert 20% of the energy in the fuel into driving the vehicle or ancillaries.
- 80% of the fuel energy will be converted into heat or lost through friction or pumping losses.
- Nissan has incorporated efficient technologies into the DIG-S engine to reduce these energy losses, which thus enables lower CO_2 emissions to be achieved.

TO REDUCE CO_2

- Improve combustion Efficiency
- Reduce friction loss
- Reduce pumping loss
- Reduce heat loss

DIG-S : ULTIMATE LOW CO_2 TECHNOLOGIES

Ultimate low-CO_2 engine incorporating advanced technologies for reducing the three principal power losses in petrol engines and pursuing total energy management.



FRICTION MINIMISATION

- Nano-finished Camshaft
- Beehive Spring
- DLC Coating Piston Ring & Valve Lifter

COMBUSTION OPTIMISATION

- 3-Cylinder
- Compression Ratio of 13:1
- Direct Injection
- Thermal Control of Combustion Chamber
- High Thermal Conductivity Piston Ring
- Sodium cooled valve (Exhaust)
- Copper Valve Guide (Exhaust)

PUMPING LOSS REDUCTION

- Miller Cycle
- EGR (Exhaust Gas Recirculation)

ENERGY MANAGEMENT

- Stop/Start system
- Regenerative Alternator

ENERGY MANAGEMENT

STOP/START SYSTEM

	Deceleration	Auto	Vehicle Stop	Auto	Restart
VEHICLE CONDITION		Indicator illuminates on instrument panel		Indicator extinguished on instrument panel	
DRIVER OPERATION	 Apply brake and depress clutch pedal	Release clutch pedal  Neutral position	Depress clutch pedal  Neutral position		 Depress accelerator pedal
ENGINE CONDITION		 Engine stops	 Engine restarts		

5 TO 6%* AVERAGE FUEL ECONOMY SAVING WITH STOP/START SYSTEM

* Tests conducted by Nissan

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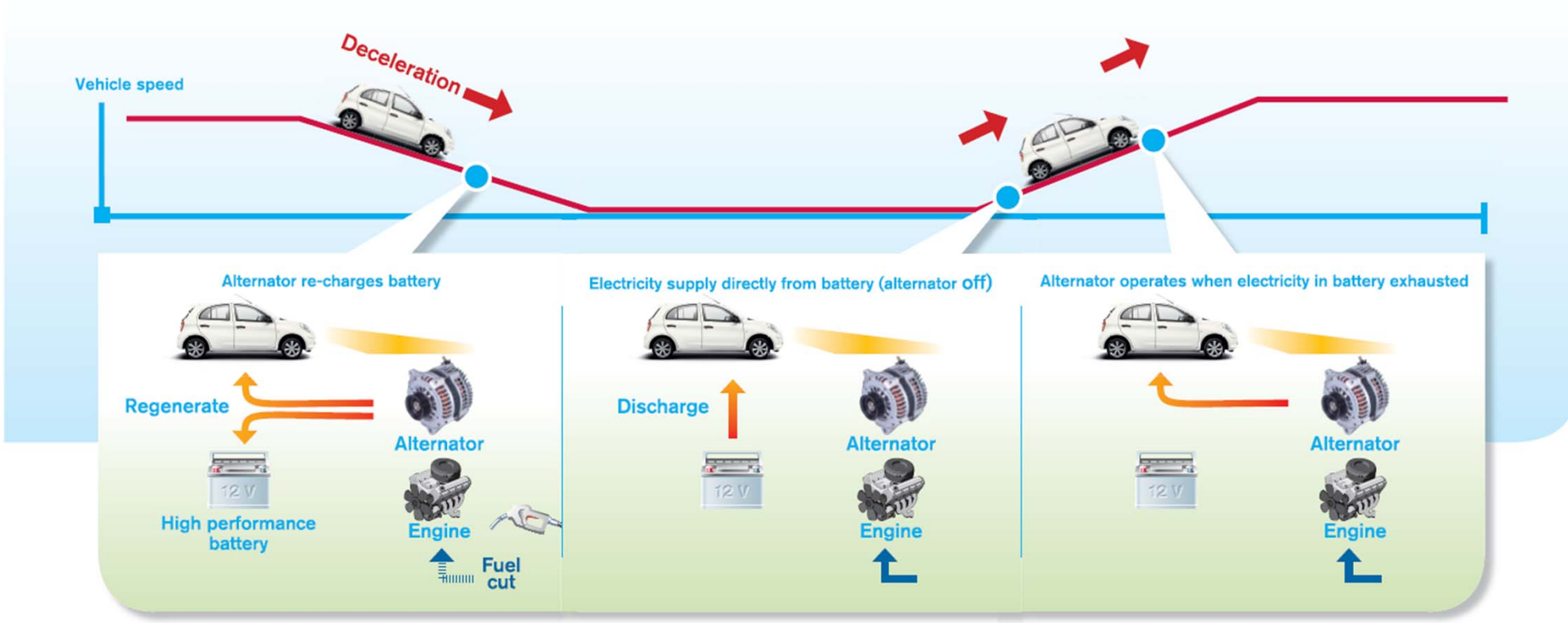
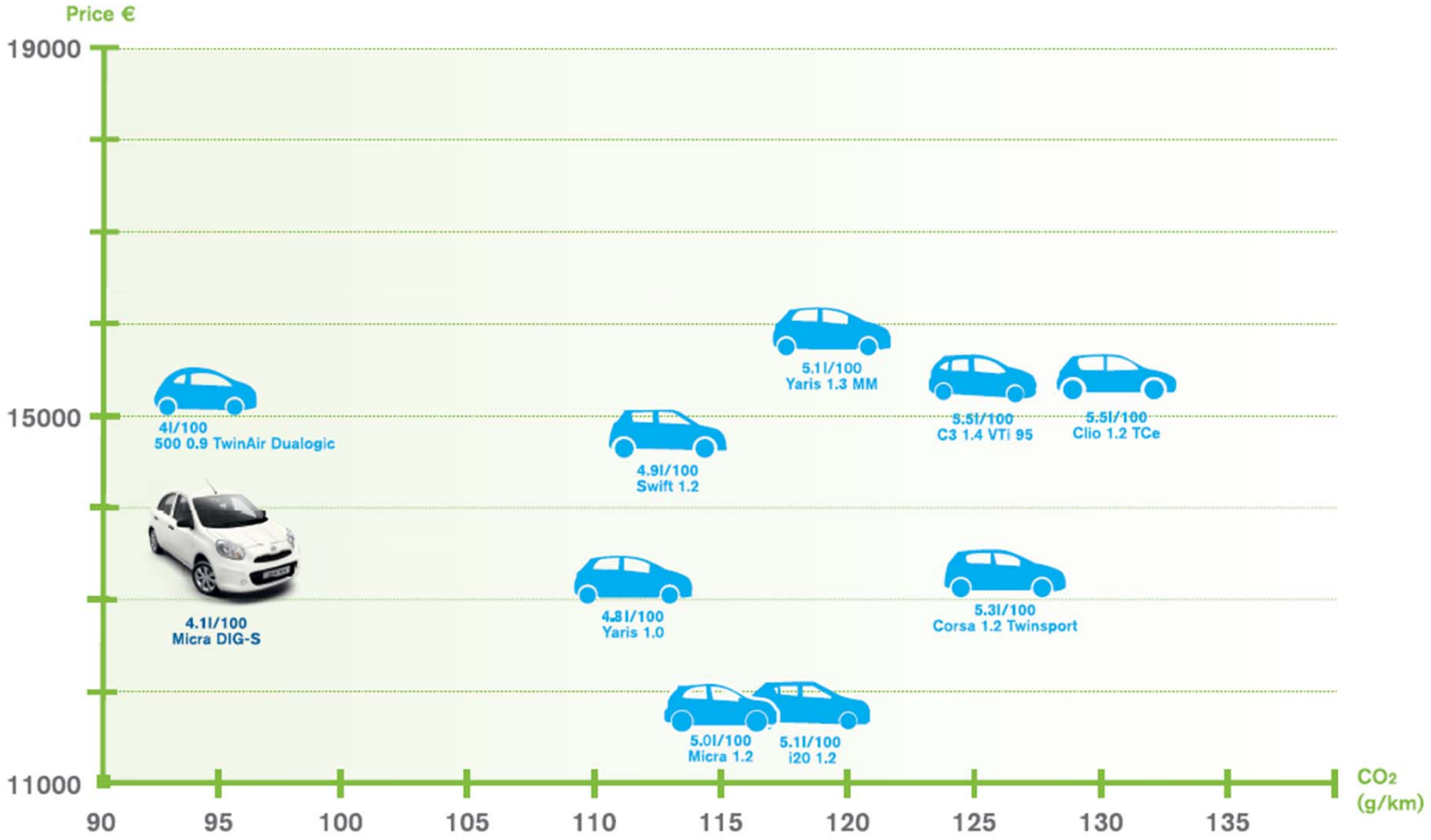
ENERGY MANAGEMENT

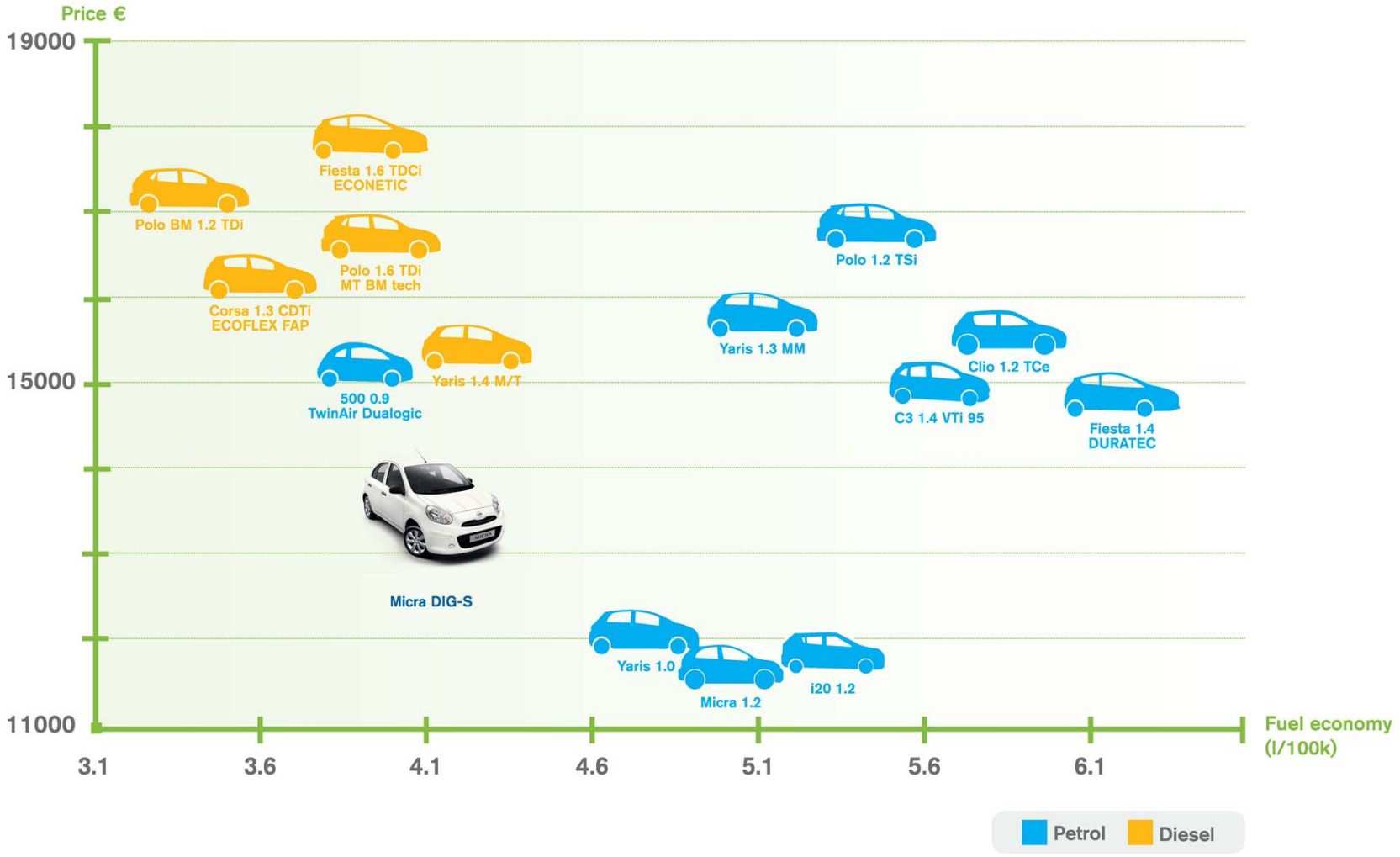
REGENERATIVE ALTERNATOR



NEW MICRA DIG-S: ONE OF THE CLEANEST PETROL CARS IN THE WORLD



MICRA DIG-S: 15% CHEAPER THAN A DIESEL CAR WITH EQUIVALENT FUEL ECONOMY



MICRA DIG-S KEY FEATURES

MICRA DIG-S: STRONG ECONOMY, LOW EMISSIONS AND NO COMPROMISE ON PERFORMANCE

Diesel like economy without the cost penalty, plus petrol engine power and refinement.

MICRA 1.2 DIG-S

TOP 4 REASONS FOR PURCHASE OF A SMALL DIESEL CAR		
PRICE	22%	15% CHEAPER THAN EQUIVALENT DIESEL CARS
FUEL ECONOMY	17%	4.1L /100km
PERFORMANCE	7%	98 PS (SUPERCHARGER)
LOW CO_2	4%	95g CO_2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