

Volvo Car Corporation's world-class technology

The Volvo Car Corporation is taking the next step towards zero emissions and climate impact through a new, downsized engine range consisting solely of four-cylinder petrol and diesel engines.

"It's time to stop counting cylinders. Downsized engines can go hand in hand with our customers' expectations on luxury and driving pleasure," says Peter Mertens, Senior Vice President Research and Development at the Volvo Car Corporation.



The Volvo Car Corporation's upcoming four-cylinder VEA (Volvo Environmental Architecture) engine range includes common rail diesels and direct injected petrol engines. It covers the whole range from high power and torque variants to fuel-efficient derivatives. "Our four-cylinder focus is the perfect way for us to quickly reduce CO2 emissions and fuel consumption. We will develop four-cylinder engines with higher performance than today's six-cylinder units and lower fuel consumption than the current four-cylinder generation," continues Peter Mertens.

The Volvo Car Corporation will promote economies of scale within the company's own model range through a new vehicle architecture: SPA (Scalable Platform Architecture). SPA allows most Volvo models to be built on the same production line irrespective of vehicle size and complexity. "We're taking our technological future into our own hands. Both our new architecture and the new engine range will enable us to be on par or even beat our toughest competitors in crucial areas such as driving dynamics and fuel economy," says Peter Mertens.

In addition to the industrial benefits of common vehicle architecture there are also significant product-related advantages. The Volvo Car Corporation will take the lead in automotive lightweight design with upcoming SPA models being 100-150 kg lighter than current models of the same size.

The new architecture enables electrification at all levels - and new chassis technologies combined with the lower weight and improved weight distribution will boost driving dynamics. The electrical architecture is the backbone of the company's drive to reinforce its leading position in active safety.



The new concept car, the Volvo Concept You, also shows that SPA offers the Volvo Car Corporation's design team greater freedom to give forthcoming Volvo models more exciting looks.