



Press information

The new Volvo FH – a major challenge for Volvo Trucks' designers

Truck design is about much more than just colour, shape and attractive lines. Behind the new, safer, larger and more ergonomically optimised Volvo FH lies a significant design challenge. "Coming up with solutions where design and function go hand in hand was one of our most important tasks," says Rikard Orell, Design Director at Volvo Trucks.

From the first stroke of his pen on the drawing board to complete truck, the process took just over five years. Several thousand hours and at least an equal number of decisions and procedures later it was finally ready – the new Volvo FH.

"The design challenge we were given was to create something that was exciting and fresh, while at the same time retaining and carrying over all those elements that were so highly appreciated in the previous model," relates Rikard Orell.

In practice what the Göteborg-based design group had to do was to find solutions in which all the individual parts of the truck interlinked smoothly with each other and created a single cohesive feel. Every visible surface, inside as well as out, was examined in minute detail by the design department. So too were the sounds and tactile feel of the buttons and controls, the structure of the textiles and the in-cab lighting – all were tailored to meet the high demands and expectations of an all-new Volvo FH. Demands that are expressed in parameters such as tough standards regarding safety and driver's environment.

"There is sometimes this misunderstanding regarding design – that it's simply about appearance, about colour and shape. The reality is that design and function must go hand in hand. The designer's task is to come up with solutions that make all the component parts of the truck – both the hardware and the software – join together in a single, cohesive visual and functional entity," explains Rikard Orell.

One early stage of the design process required the design team to find an expression and an identity for the new truck. Shapes and lines were exaggerated with the aim of finding the overall visual message that the team wanted to convey.



“The first thing that was discussed was the various technical needs, but the basic drive during the concept phase has consistently been to advance and to increase the cab’s interior volume,” relates Rikard Orell.

Asok George, Chief Designer Exterior at Volvo Trucks and one of the team members, relates that work on the design of the new truck started with a pen on a sketchpad. And there was plenty of scope for giving his imagination a free rein.

“My inspiration came from everything from new technology and nature to Volvo’s heritage and Scandinavian culture and design. But my biggest source of inspiration by far was the drivers who actually use our trucks,” he says.

As the work progressed, the sketches moved into computer-generated models and the design took on more realistic lines.

“In the field of design it’s often all about the details. When you look at the truck it should have a design that instinctively feels just right,” says Asok George. “It’s the basic shape, the stance and the proportions that are crucial. All lines and curves should flow naturally and there mustn’t be anything that disrupts the eye,” he says.

In order to achieve this, the design group used physical clay models, both full-size and scale models. “Because even if modern computer programs help the designer to visualise his or her visions and ideas – the virtual tools are not always enough,” explains Asok George.

“In the computer the designer uses more of his or her analytical skills, but when working with clay models it’s more emotional, everything comes from the heart. For me it’s the combination of these two approaches that generates a perfect design,” he says.

Having said that, even if the creative aspect is an important part of the design of a new truck, it isn’t everything. The demands on the vehicle’s appearance must also dovetail with a variety of technical requirements and demands from the truck’s operating environment, for instance that the new FH must have a larger cab than its predecessor to enhance both comfort and driver safety.

In order to monitor driver needs, an important part of the design process involved interviewing drivers at truck stops throughout Europe. They got to sit in early mock-up models of the new Volvo FH and their feedback was subsequently used to refine and modify the design to satisfy driver needs.

“It makes no difference how many skilled designers or engineers we have at Volvo Trucks,” says Claes Hillén, who is responsible for driver interviews and customer clinics



at the product development department. “We can never exactly understand precisely what a driver’s everyday working situation is like. The only way to gain an insight into their day-to-day reality is by asking them,” he says.

All told more than 2000 drivers were interviewed over a five-year period and together they provided hundreds of years of first-hand experience from truck driving.

One clear wish that the drivers expressed was for more and larger storage compartments. This meant the cab had to be bigger. And this in turn meant that the previously so characteristically raked-back A-pillars – a Volvo FH hallmark – had to be made more upright. So the design team worked hard on sloping lines and a slanting roof so as to retain the dynamic FH profile. The result is a cab that is now one cubic metre bigger and offers 300 litres more storage space. This also means the seat can slide back a further four centimetres, and in an accident there is more survival space than ever before.

“This is precisely what design is all about for me: ensuring that the product we create actually is tailored to the specific needs of the people who will use it,” says Rikard Orell. “That means not only going with the rational choices, since we human beings are not only rational but also very emotional. For a driver it’s a matter of being able to live and operate comfortably in the truck and also about feeling a sense of pride in the job. The truck’s functional and dynamic design has the task of contributing to that,” he adds.

Another example of the way design and function go hand in hand to improve safety in the truck is the new rear-view mirrors. In the new model they are attached to slimmer arms than before and the large cover surrounding the glass has been deleted.

“This solution reduces the number of blind spots for the driver so the safety gains are immense. What’s more, I feel the new design also gives significant aesthetic benefits,” says Rikard Orell.

One important factor to bear in mind during the design process was that the new truck had to retain its distinctive Volvo profile. That typical Volvo design, based on low-key Scandinavian colours, simple elegance and efficient lines – played the lead role.

“The result is a truck that is honest, straightforward, without unnecessary adornment. Everything you see is there for a reason. Although we’ve changed just about everything on this truck, we’ve nonetheless succeeded with our aim: to capture the heritage of the previous FH and at the same time give the new truck a more composed, self-assured attitude,” concludes Rikard Orell.



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