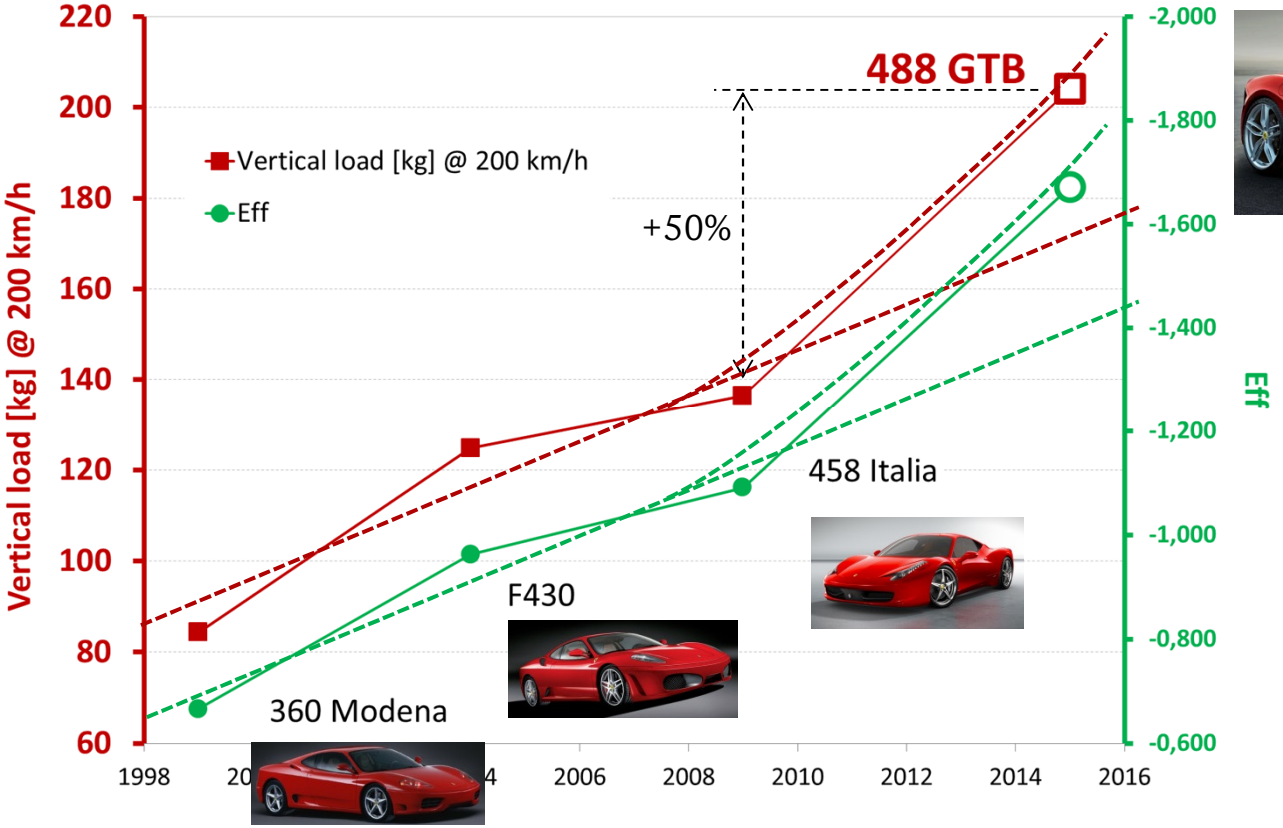
Aerodinamica

F142M – Press event

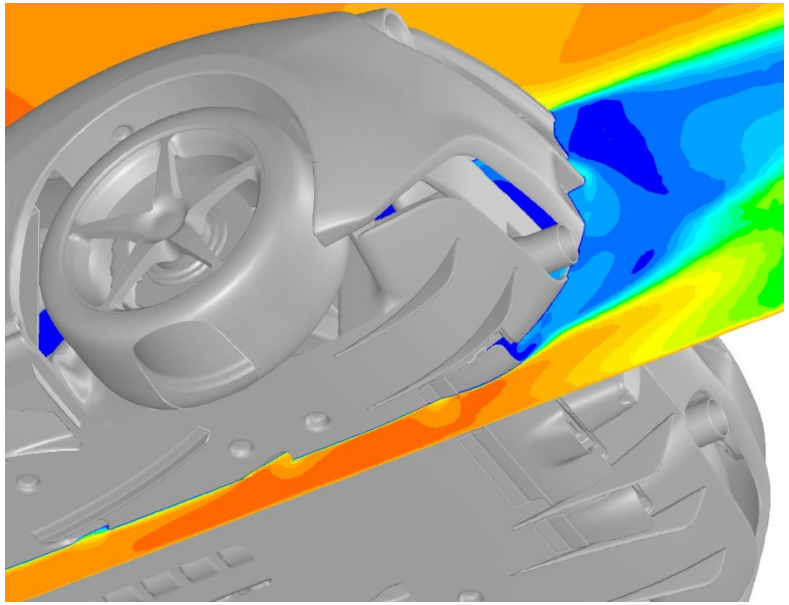
Rear engine car aero performances trough years

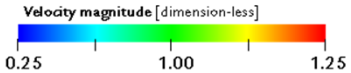


The outstanding aero performances for a rear engine V8 Ferrari road car achieved trough:

- Aerodynamic underbody equipped with solutions born on the tracks experinece
- Active aerodynamics
- Blown rear spoiler (patented)
- Base bleed
- Aero pillar solution on the front bumper

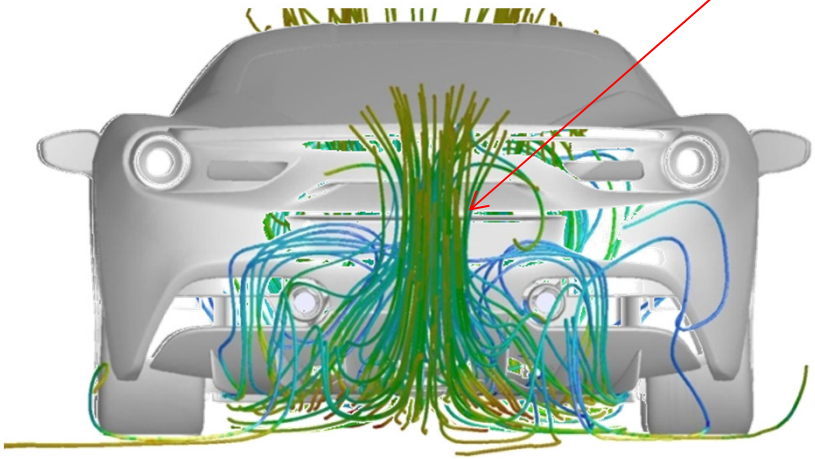
ACTIVE AERO DEVICES

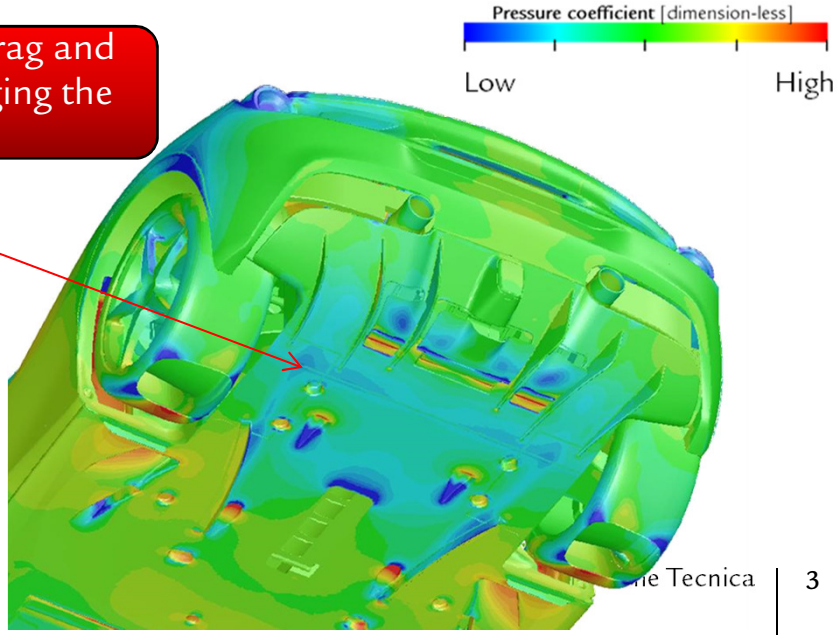




Active rear flaps manage the diffuser expansion to increase downforce or reduce drag depending on driving conditions.

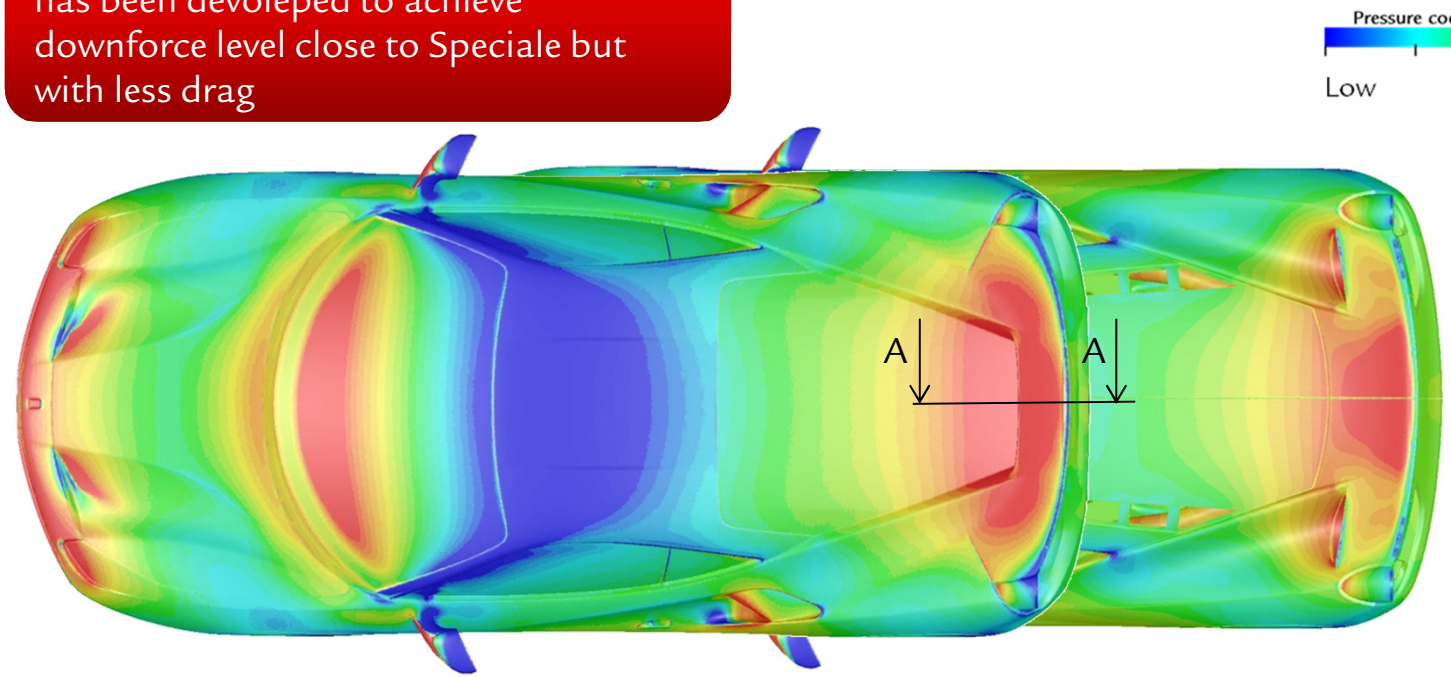
Flaps in the lowered position reduce drag and downforce over the rear axle by managing the diffuser vorticity



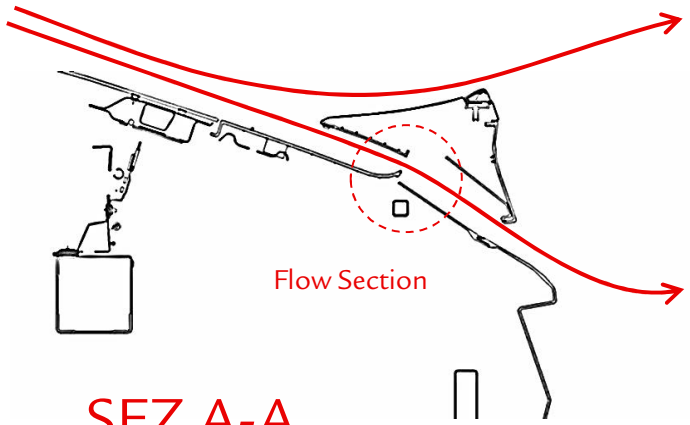


Blown spolier

For the 488 GTB a innovative solution has been devoleped to achieve downforce level close to Speciale but with less drag



Thanks to the bleed under the spoiler and the particular shape of the bodywork the flow is diverted upward (down force) and the flow passing trough the calibrated section reduces the drag by feeding the wake

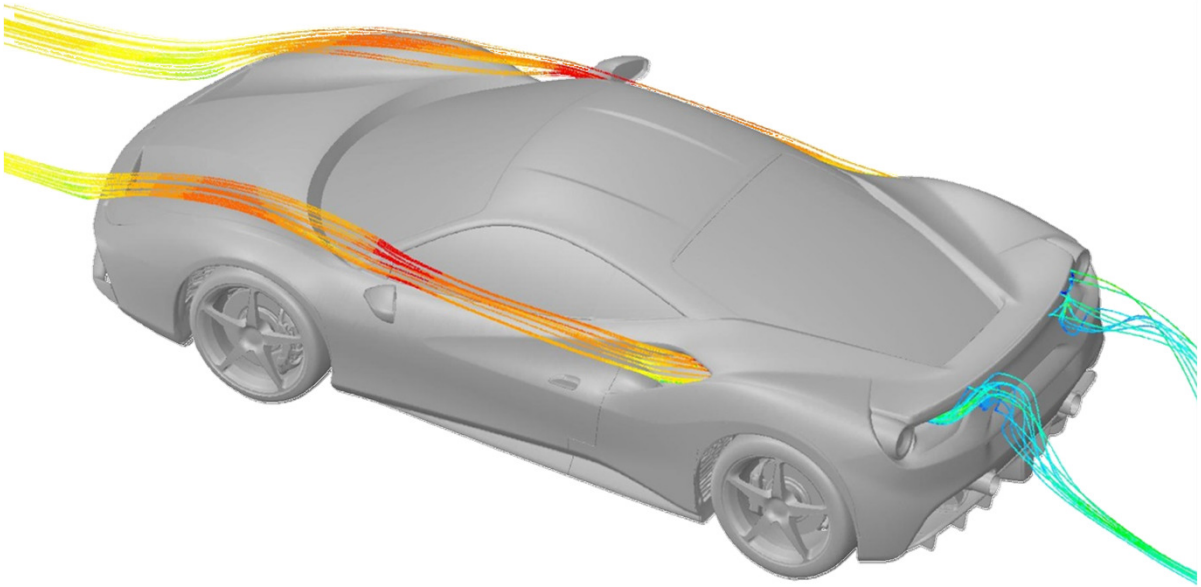


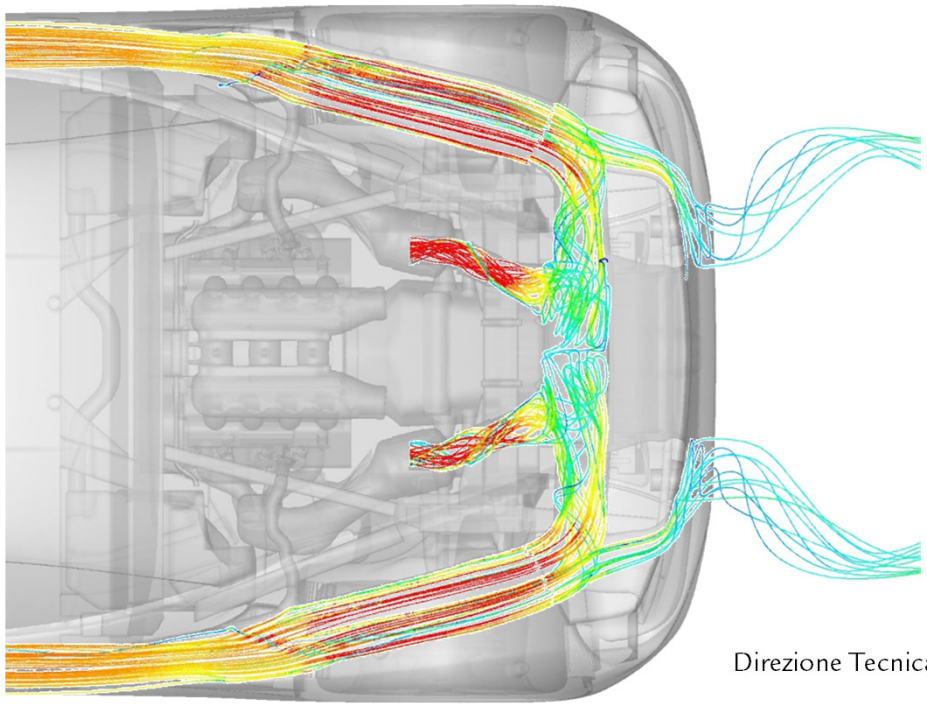
SEZ A-A

Base Bleed

The engine intake has been placed in a position with higher pressure recovery

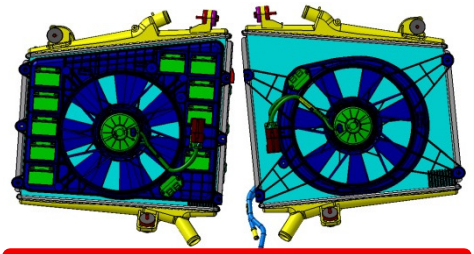
Part of the air trough ducts is used to fill the wake (base bleed) to reduce drag



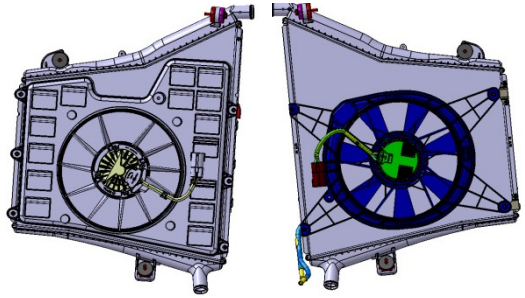


Front bumper

Increased size of the radiators (+20%) makes growing the air flow demand for cooling, and so the inlet area

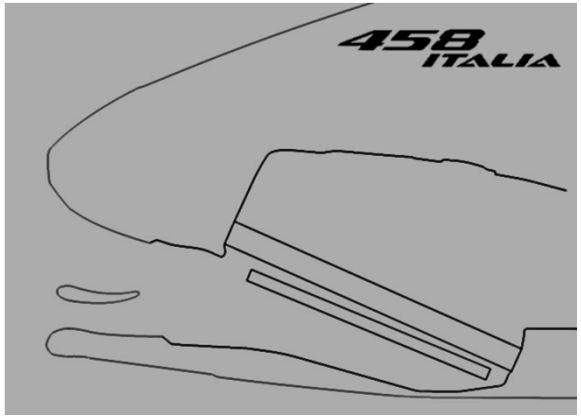


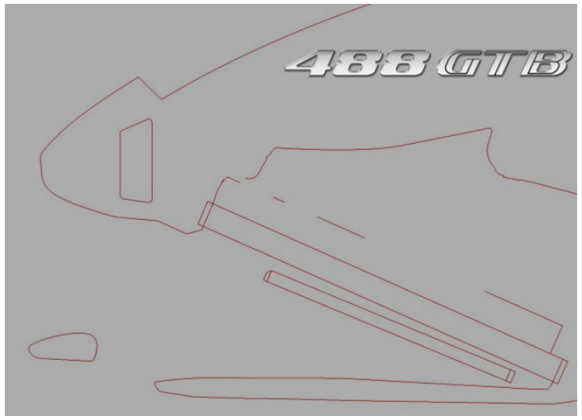
458 Italia Front radiators



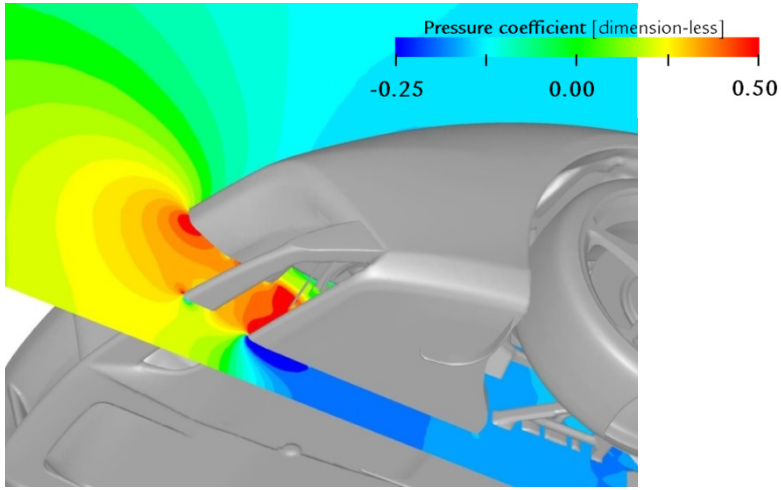
488 GTBFront radiators

Front radiators have a complex shape to maximize the space exploitation without requesting car size increase (drag reduction)





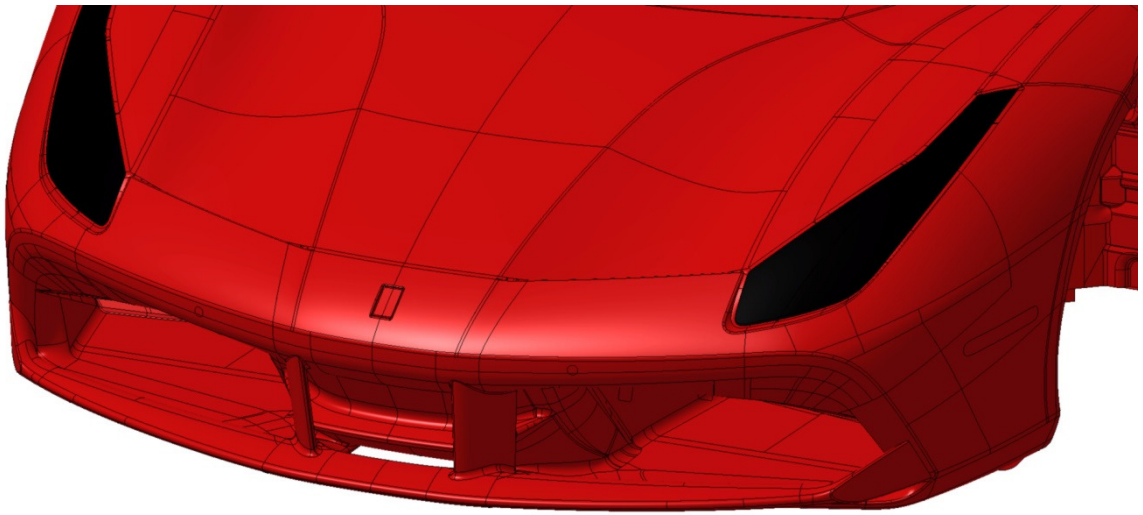
The front wing section profiled traverse is designed to maximise the mass flow rate towards the radiators, and in the meantime is an efficient generator of front downforce

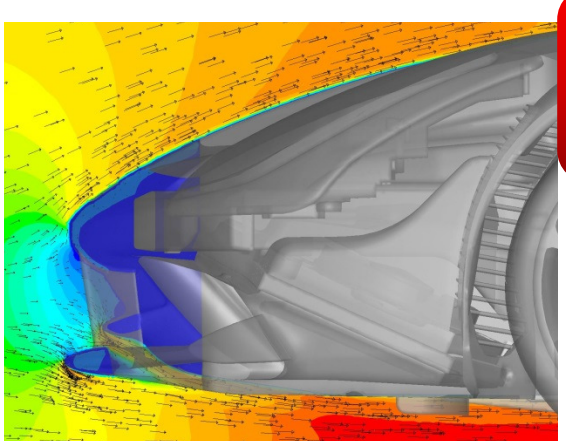


The air that is encouraged to pass under the traverse feeds the radiators with an extra flow rate. In the meantime this passage generates aspiration peaks on the flat front underbody

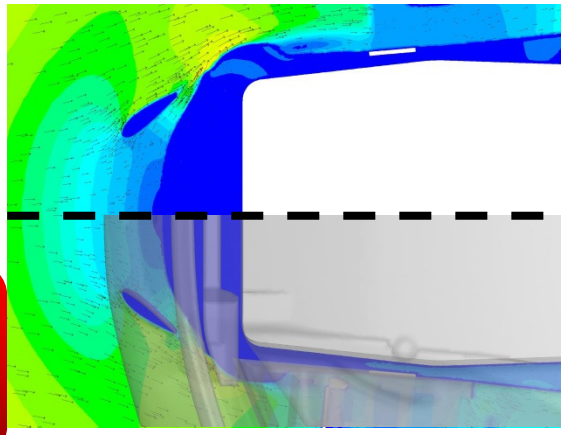
Front bumper – Aero Pillar

The central part of the bumper is a multi purpose device: it has the task to distributes the energy collected from the central nose for different functions





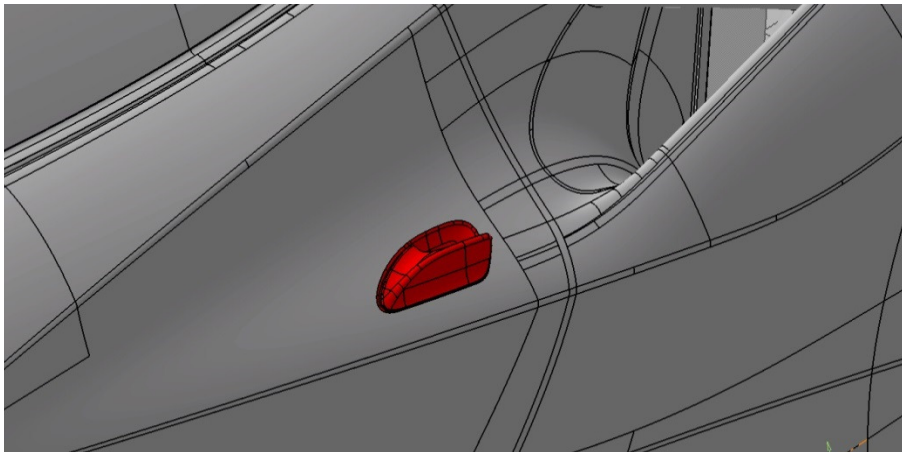
The central slot channels the air trough the underbody improving the performance of the underbody

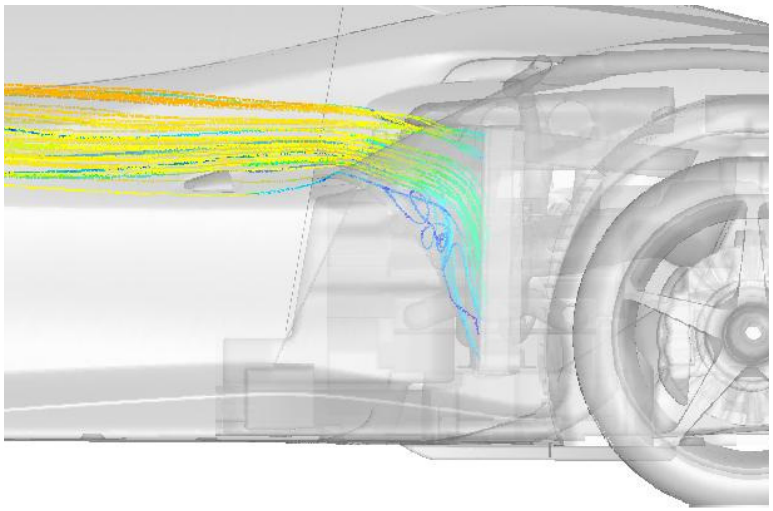


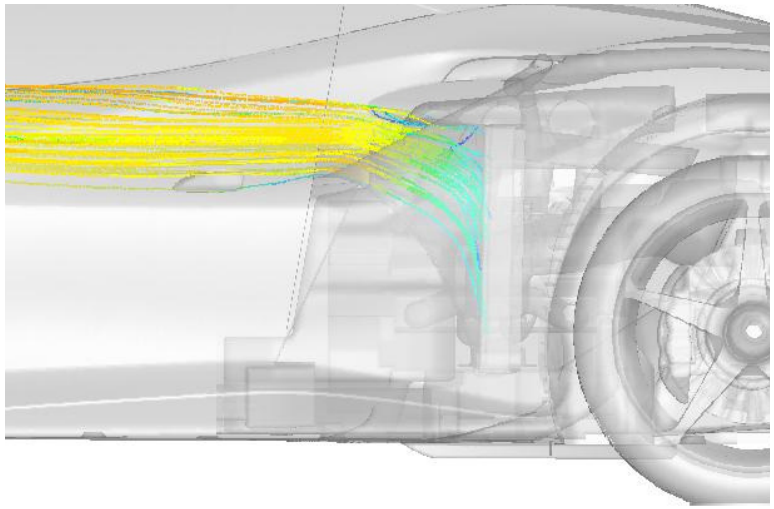
The vertical airfoils guide the airflow towards radiators improving the cooling

Door Handle

The fin-shaped door handle is one of the example of the aero-oriented design of the body details.







The door handle is designed to improve the intercooler mass flow rate, so it is part of the complex system that defines the Intercooler intake