



TECHNICAL PRESENTATION



# SECTORS

AUTOMOTIVE

FOUNDRY

PLASTIC MOLDING

COMPOSITE MATERIALS

STRUCTURAL ANALISYS

PRINTING MACHINES

GEAR AND TRASMISSIONS

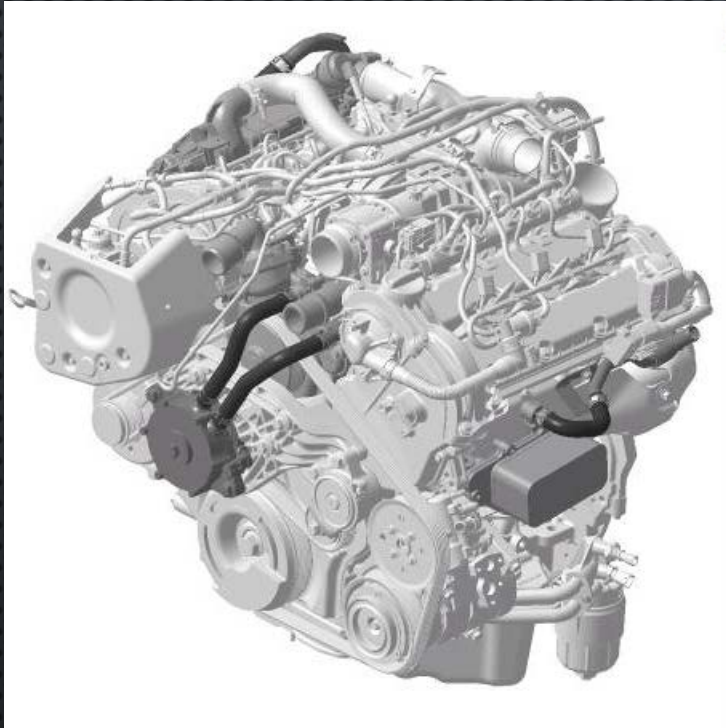
MACHINE TOOLS

RAPID PROTOTYPING

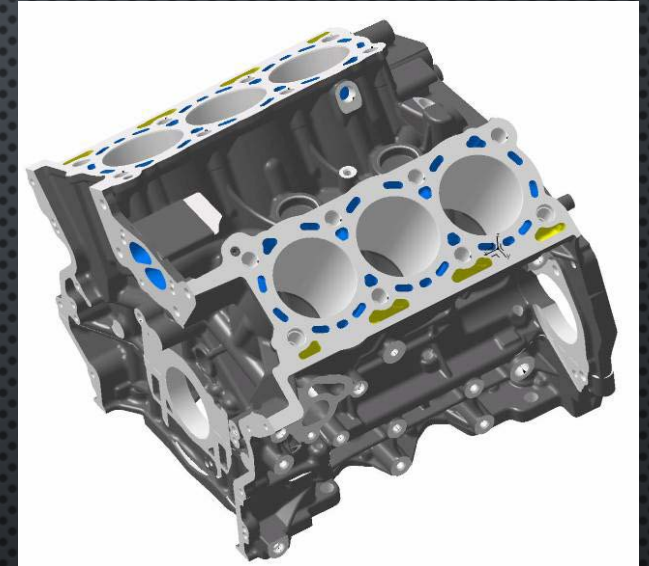
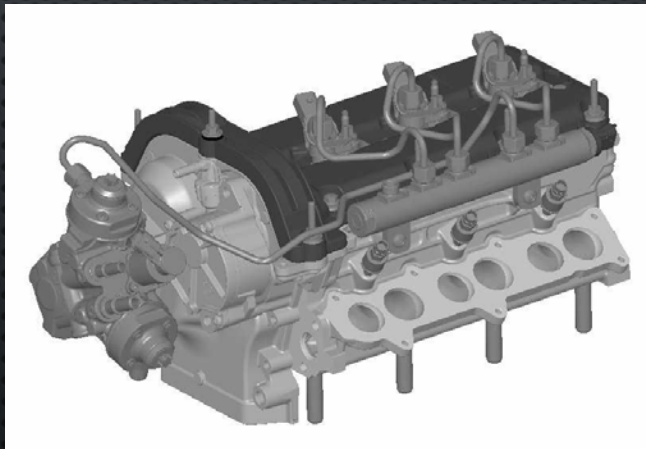


# AUTOMOTIVE

## ENGINE DRAWINGS (DMU)



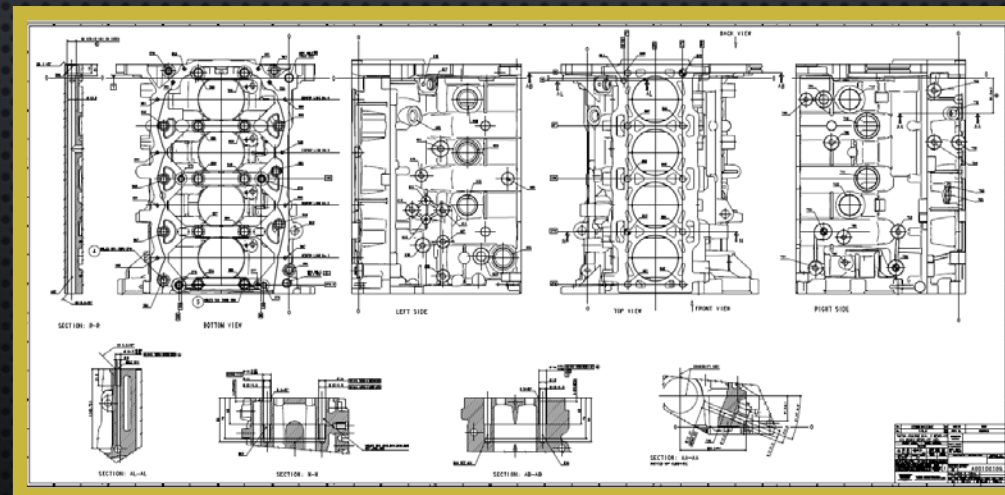
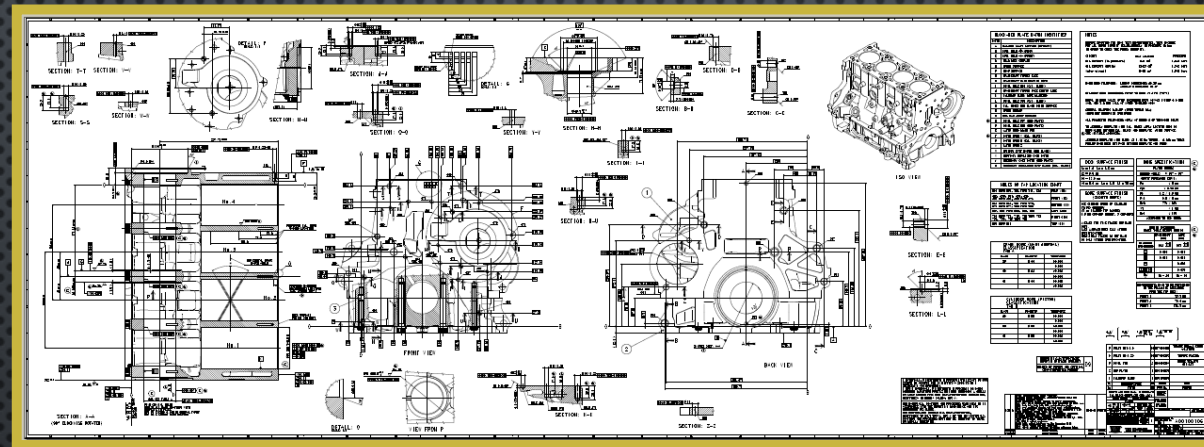
### 3D Models





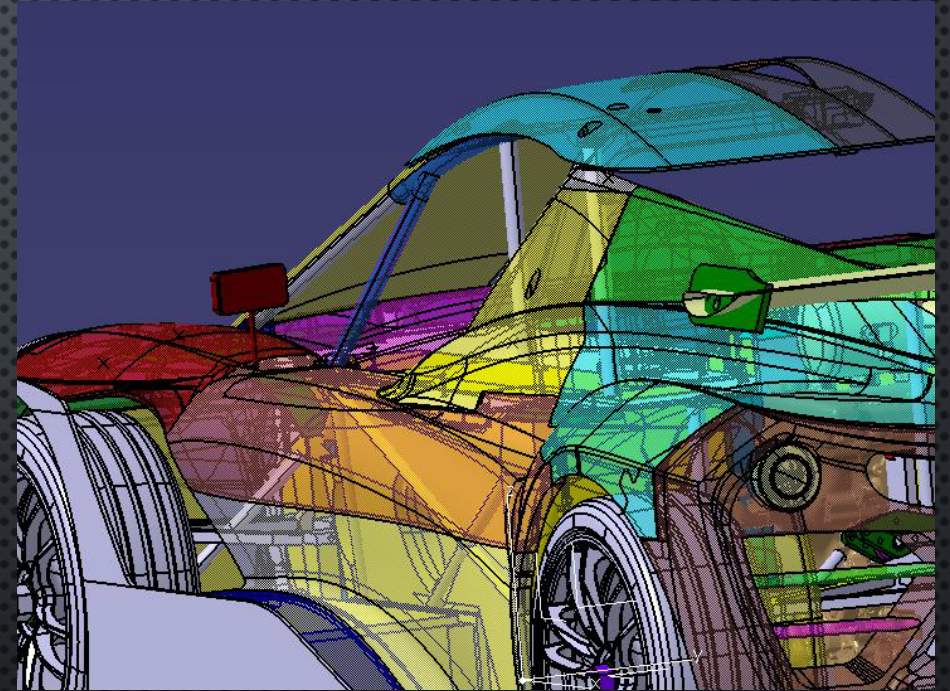
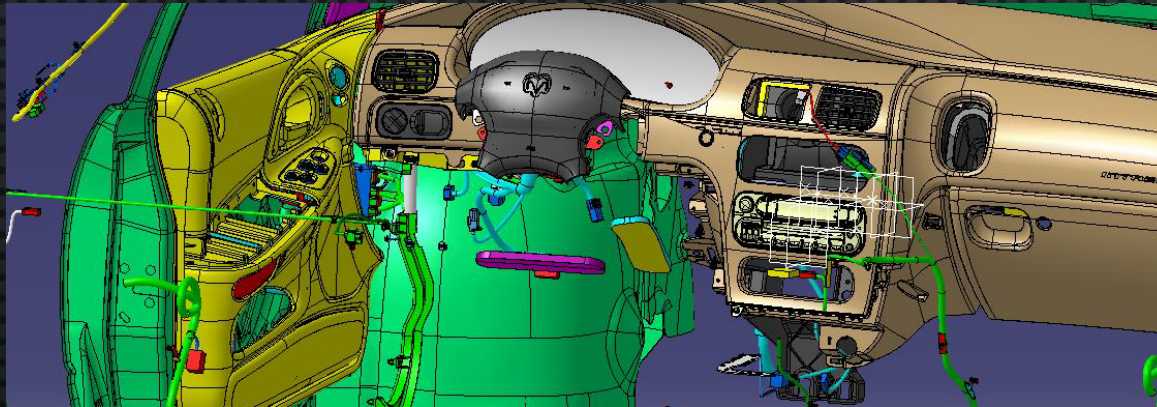
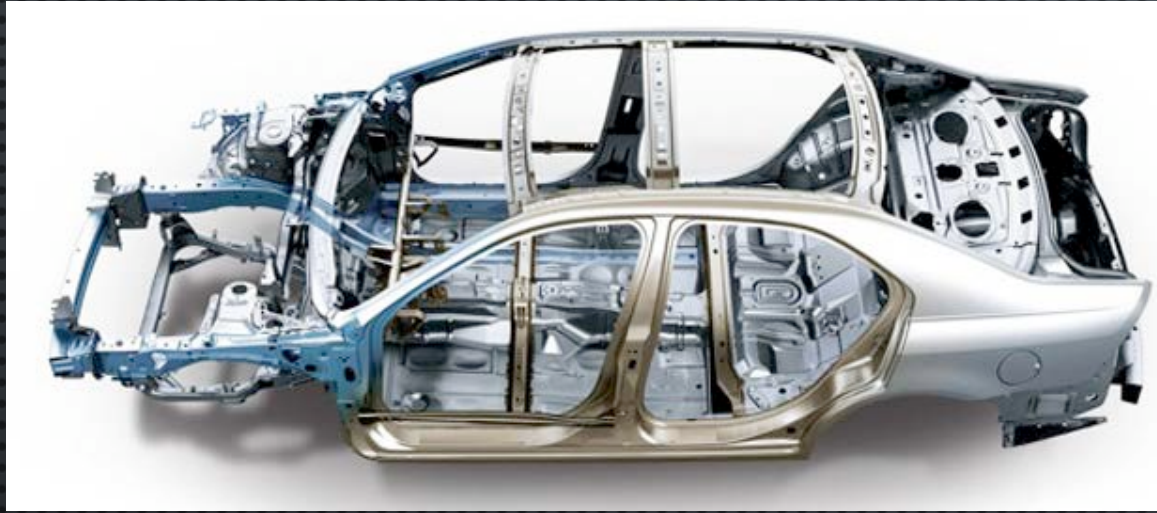
# AUTOMOTIVE

## 2D DRAWINGS





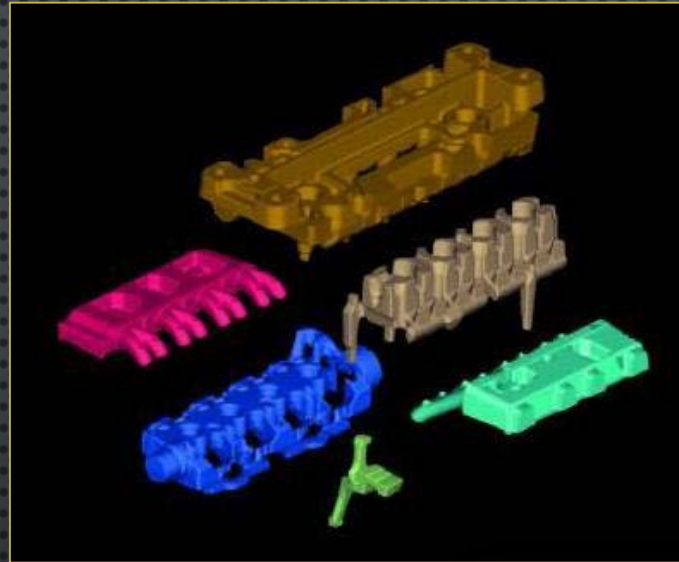
## BODY , CHASSIS , EXTERIOR and INTERIOR DESIGN





# FOUNDRY

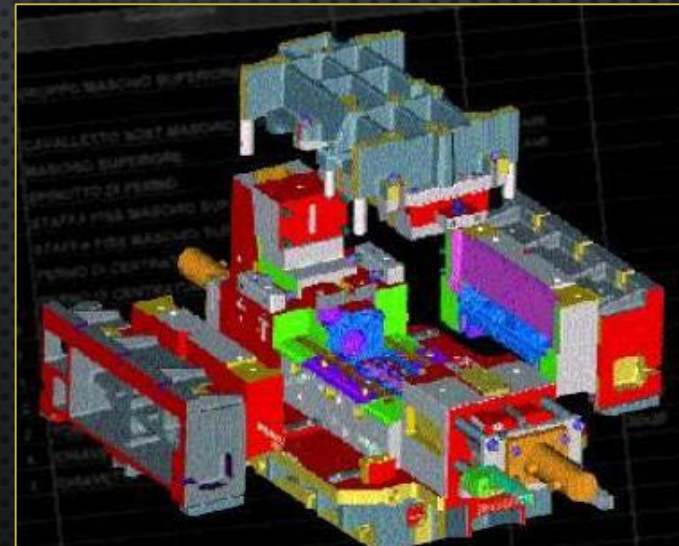
## CORE MODELS



Aluminium, cast iron,  
magnesium

Gravity casting, sand  
casting, Die casting

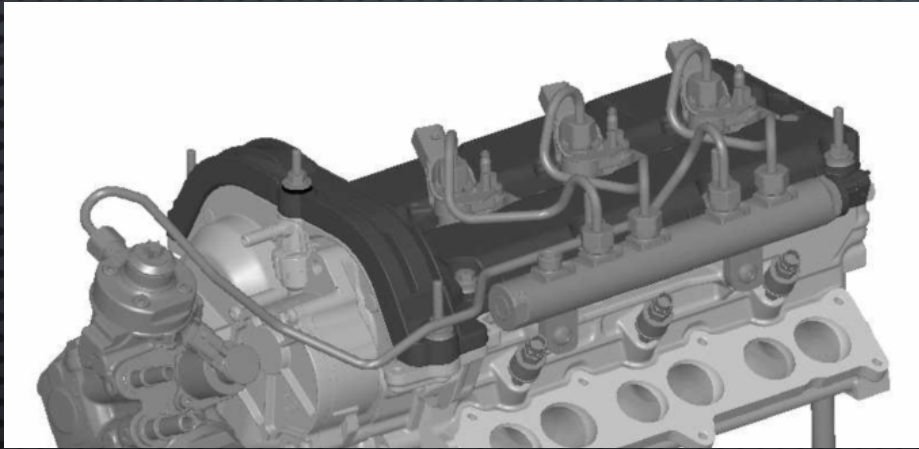
## TOOLING MODELS





# PLASTIC COMPONENTS

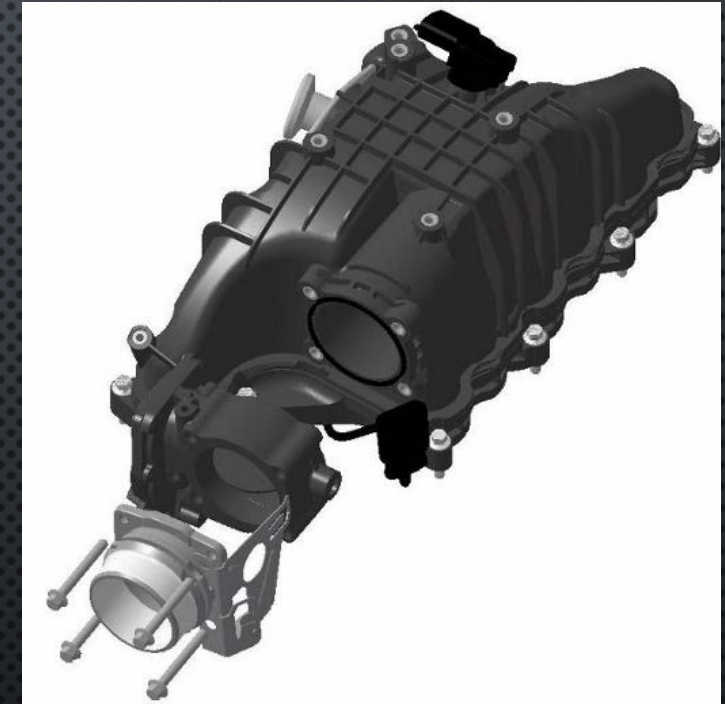
## CAM COVERS



ABS, PVC, PP (Polypropylene),  
PE (Polyethylene)

Thermoplastic injection

## INTAKE MANIFOLDS



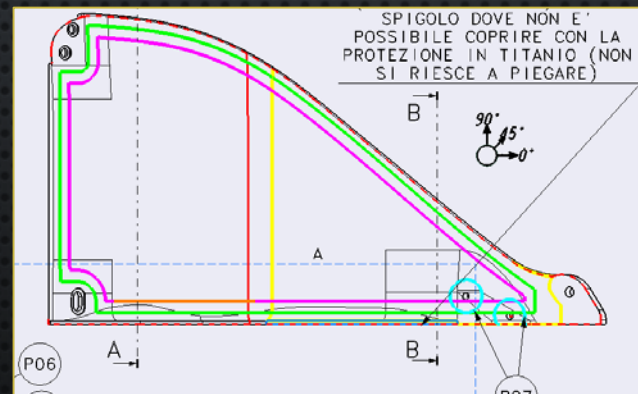
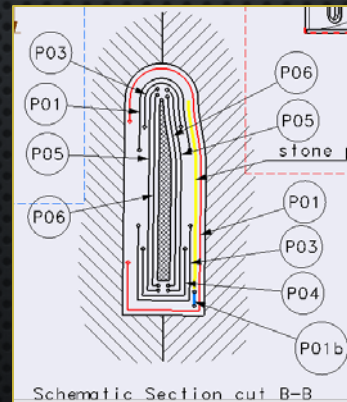


# COMPOSITE MATERIALS

ACAD Engineering has been offering F1 services on composite and mechanical design since 2011:

- Steering system, suspension system, FIA test tool
- Aerodynamics composite Front Wing, Rear Wing & Brake Duct
- Body composite Internal Bonnet, external COKE
- Structural Composite Suspension system (RWB, FWB, PULL-ROD, TRACKROD)

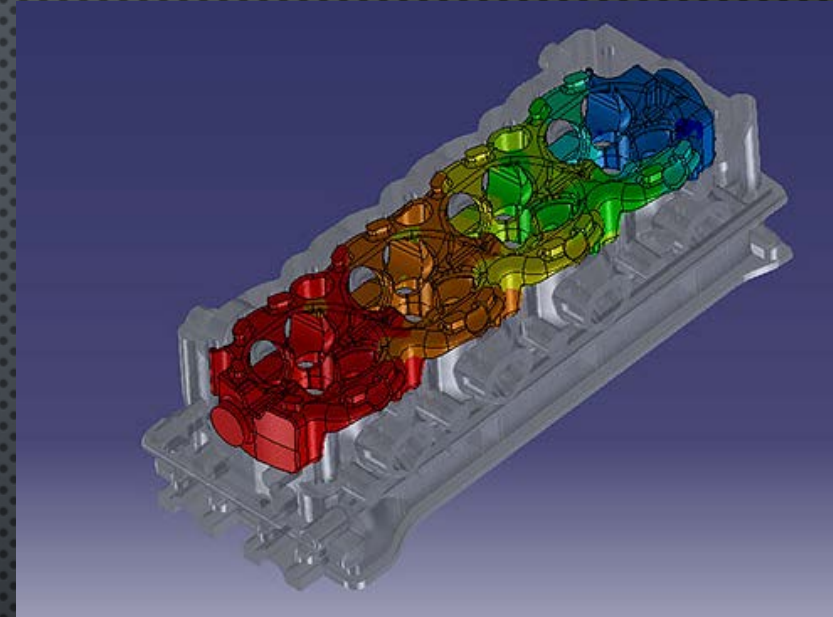
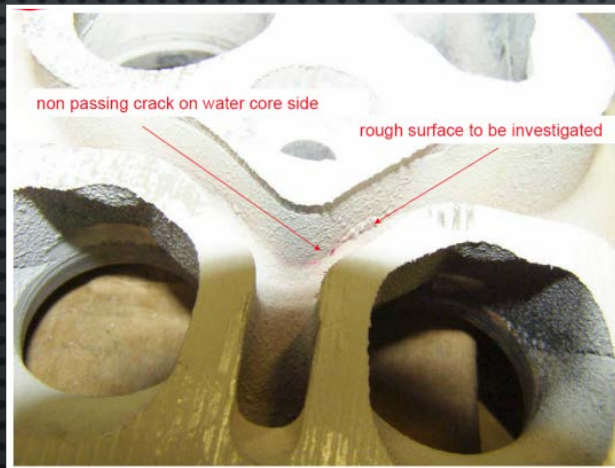
All composite design is related with PLY 3D structure and PLY-BOOK Description



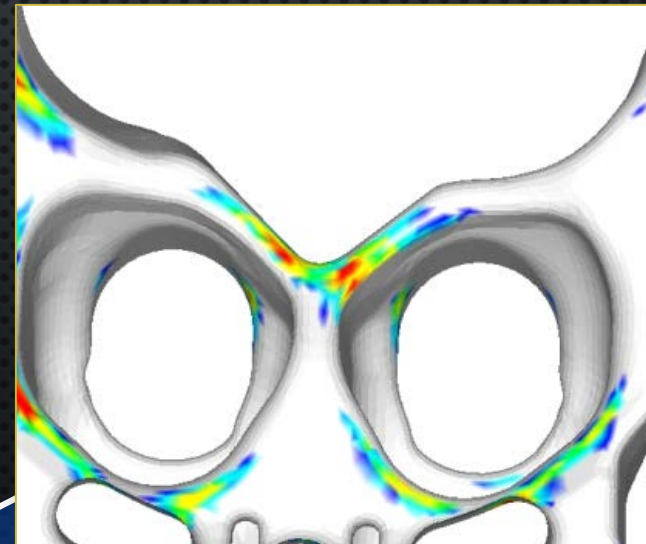


# STRUCTURAL ANALYSIS

## RESULTS



## UPDATE MODEL AFTER ANALYSIS RESULTS





# ENGINE CALIBRATION

OUR SUPPORT ON CUSTOMER'S SITE:

ENGINE CALIBRATION

AFTER TREATMENT CALIBRATION

PERFORMANCE AND ECONOMY  
CALIBRATION

## SOFTWARE

- Puma Avl
- Indycom Avl
- Inca's Etas Bosch –ECU interface
- GT-Suite/GT-Power V7.0



# RAPID PROTOTYPING

## LOM – 3D Printing



## MAXIMUM DIMENSIONS

400 x 350

We can weld parts in  
larger dimensions

Stereo lithography  
system

2000 x 1000

This technology, unlike other rapid prototyping systems, allows the creation of completely functional and modifiable prototypes so that they can be used by the designer, for an immediate geometric functional check on the product.

For prototype creation, the software requires a STL file which can be created by the customer or realized by ACAD.

The 3D model is sliced with a series of sections and layers, that, deposited in the material, will compose and build the finished prototype.

Models can be realized in different materials:

- ABS
- POLYCARBONATE

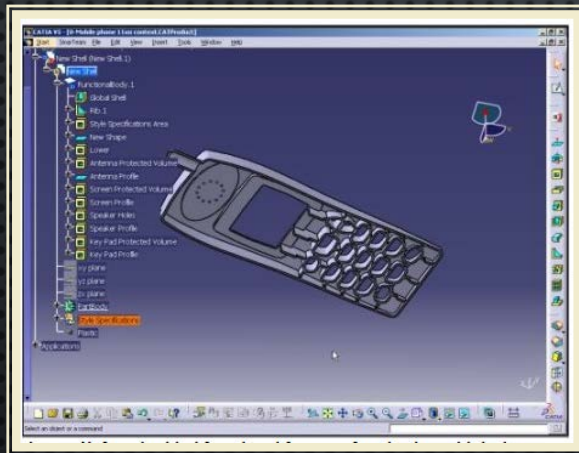
Thermal resistance varies from 70°C up to 180°C.





# RAPID PROTOTYPING

**FROM CONCEPT TO PROTO PARTS  
USING MATHEMATICAL MODELS AND LAYOUTS**





# PROTOTYPE MACHINING

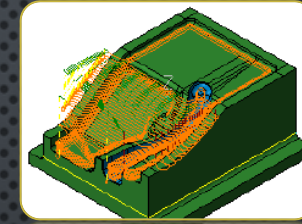


Currently in the milling department there are 4 CNC milling machines using the CAD / CAM 3D, that allow rapid and high-precision machining of the required prototypes

**MAXIMUM MILLING PLANE DIMENSIONS**

**1800 X 700**

## CAM PROCESS



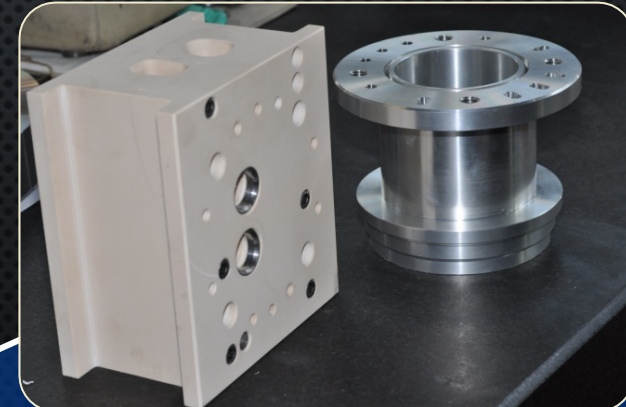
## MILLING PHASE



## PARTS CHECK



## ASSEMBLY





# SERVICES

**CONSULTING AND DESIGN ON OUR  
CUSTOMERS' SITES**

**3D MODELING OF VARIOUS  
COMPONENTS RELATED TO THE  
STANDARDS REQUIRED**

**COMPONENTS DRAWINGS RELATED TO  
THE STANDARDS REQUIRED**

**COMPONENTS ASSEMBLY AND DMU**

**BILL OF MATERIAL**

**STRUCTURAL ANALYSIS**

**CATIA – UNIGRAPHICS – PRO.E  
TRAINING**



# SOFTWARES

## STRUCTURAL ANALYSIS

**NASTRAN**

**HyperMesh**

## MANAGEMENT

**Windows Tools**  
**Windows PROJECT**

## CAD SYSTEM

**PRO.ENGINEER**  
**CREO 3.0**

**UNIGRAPHICS NX**

**CATIA V5**  
**AUTOCAD**  
**SOLID EDGE / WORKS**  
**ALIAS – MAYA – ICEM SURFACE**



# OUR CUSTOMERS

## DIRECT SUPPLIERS





# OUR CUSTOMERS INDIRECT SUPPLIERS





# LOCATIONS

## REGISTERED OFFICE

C . so Savona n° 4  
10024 Moncalieri - Turin  
– Italy –

## HEADQUARTERS

Strada Cebrosa 86  
10156 Turin  
– Italy –

## CEO

Antoniazzi Paolo  
Mob. Num. 3332883431

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