



INJECTION MOULD

COMPANY PROFILE AND
EXPERIENCE

COMPANY OVERVIEW

MISSION

Esistampi is one of the main Italian companies **designing and manufacturing injection moulds**.

Esistampi has been cooperating for 18 years with large Italian and European Industrial Groups in different fields **(automotive, motorbikes, trucks, technical parts, containers)** allowing them to deliver on time, good quality parts.



ESISTAMPI - MILESTONES

2001



THE FIRM

2008-13

THE GROWTH

15 PEOPLE - 2.500.000 €

35 PEOPLE - 5.000.000 €

2014



THE INDUSTRY

80 PEOPLE - 9.500.000 €

2017

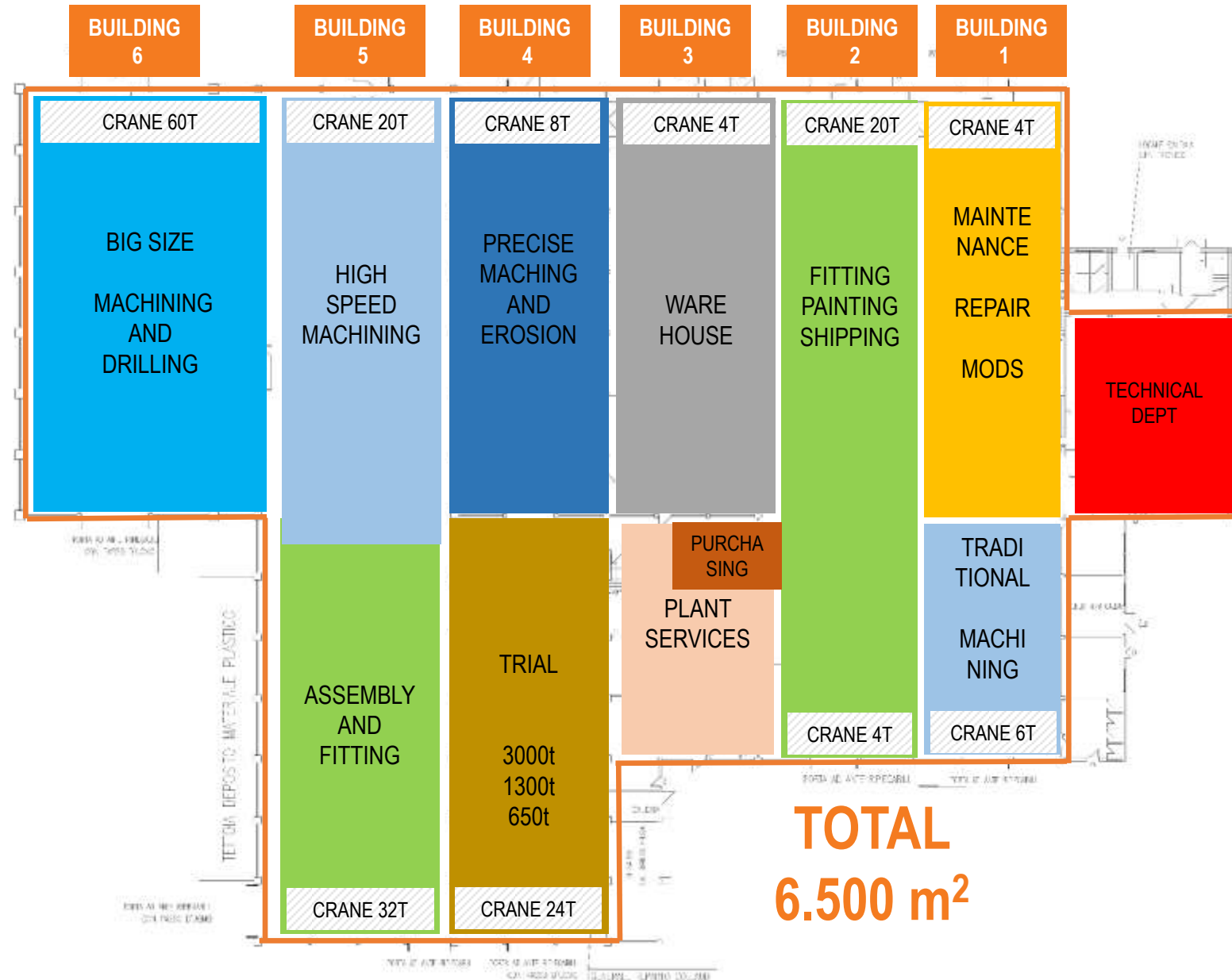
100 PEOPLE - 13.500.000 €



2014 – SES ACQUISITION AND NEW PLANT

200.000 working hours per year

- 14 CNC ranging to 10000 x 2650 x 1250
- 2 drilling max 2200
- 4 erosion, ranging to 2400 x 1300 x 900
- 2 matching presses, up to 3000 x 2500
- 10 bridge cranes max 60T
- TESTING: 650 – 1300 – 3000 Tonn





NEW STRUCTURE

Acquisition of SES and the moving of the production into the new 6500m² site allowing significant improvements in terms of:

PRODUCT RANGE: Possibility to manufacture large and very large moulds

PRODUCTION CAPACITY: Possibility to manage important multiple tooling projects

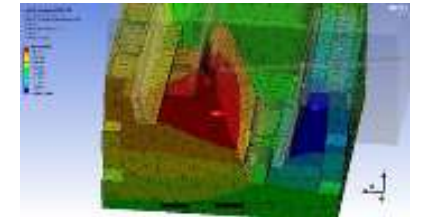
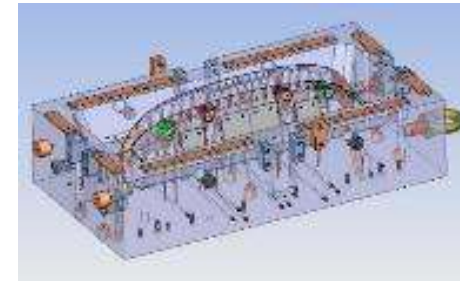
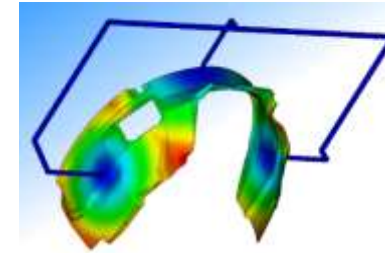
EFFICIENCY: Organization improvements, bigger technical department.

TRIAL: New testing centre with injection machines ranging from 650T to 3000T

SERVICES

Thanks to this new organizational model, Esistampi can support its customers, with a high added value, for the whole development process of the project, assuming the technical / economic responsibility according to the turnkey approach:

- **ENGINEERING**
- **SIMULATION**
- **DFM**
- **MOULD DESIGN**
- **MOULD MANUFACTURING**
- **TRIAL AND TUNING**
- **SOP AT CUSTOMER PREMISES**



WE KEEP YOUR PROMISES

End market needs are every day more challenging:

- Reduced leadtime to be granted
- Optimisation of investment for faster payback
- High quality
- Flexibility to manage modification during the mould manufacture

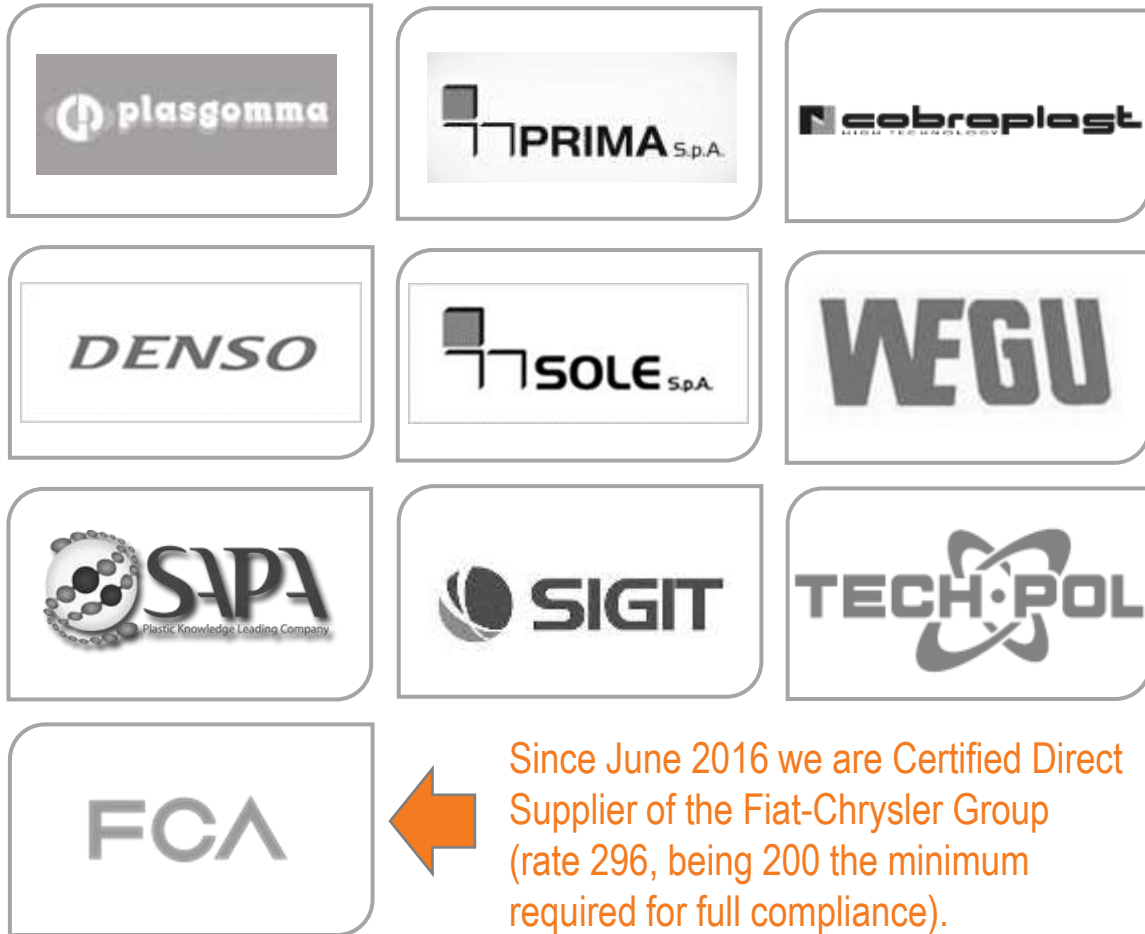
Esistampi is the right partners to accept such challenges without risks.



AUTOMOTIVE EXPERIENCE

REFERENCES AUTOMOTIVE

Our main customers:



Since June 2016 we are Certified Direct Supplier of the Fiat-Chrysler Group (rate 296, being 200 the minimum required for full compliance).

Our moulds make items for:



AUTOMOTIVE - PRODUCTS

EXTERIOR

Trims

Trims 2k

Front Grills

Spoilers

Mudguards

Mudguards 2k

Tailgates



INTERIOR

Consoles

Pillars

Ducts

Carter

Carter 2k



UNDER THE HOOD

Filter boxes

Flow regulators

Flow regulators 2k

Tanks

Air ducts

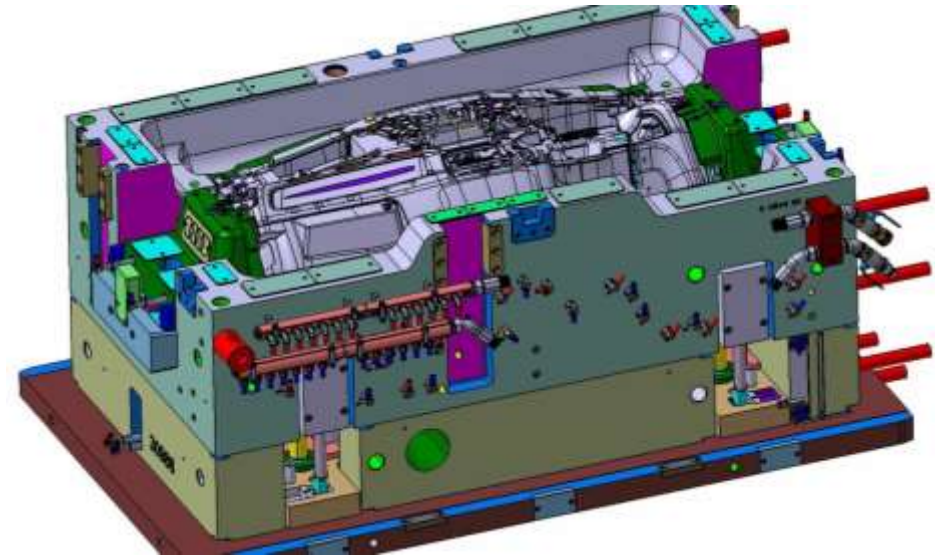


AUTOMOTIVE – LARGE MOULDS

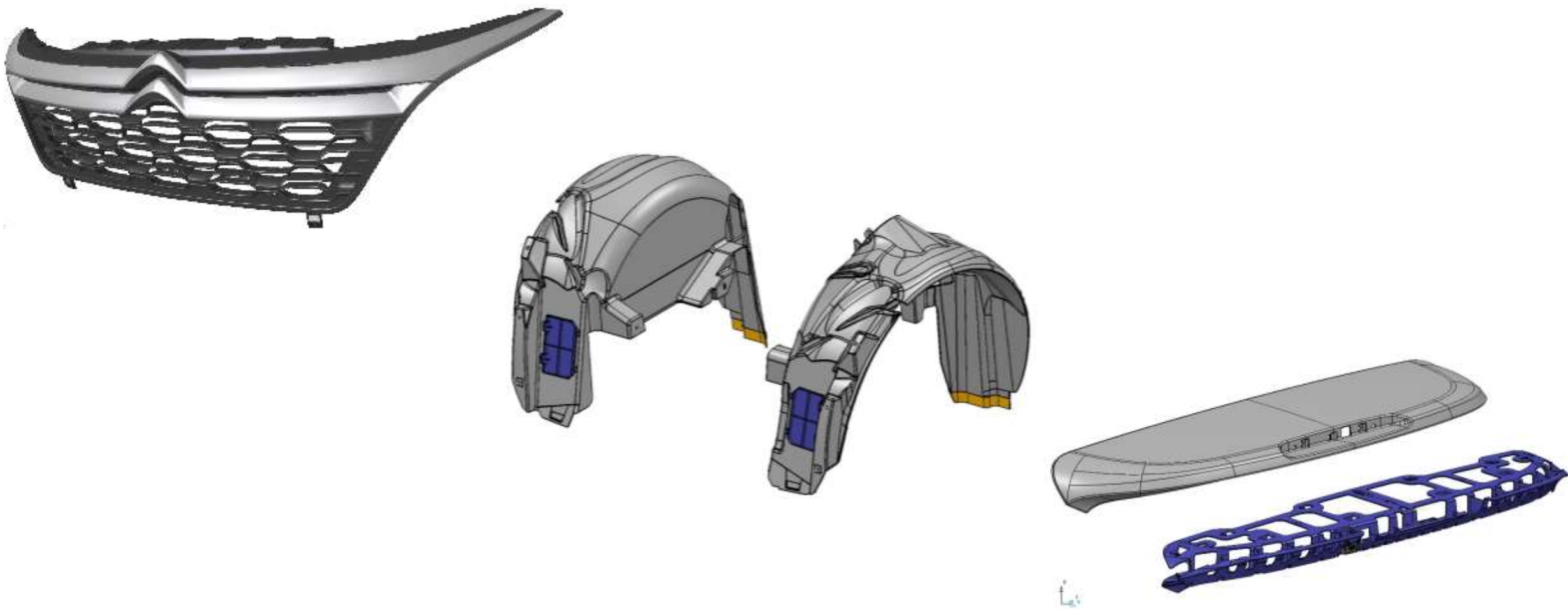
Bumpers
Spoiler
Front-end
Tail-gate



AUTOMOTIVE – Large Moulds: DASHBOARD

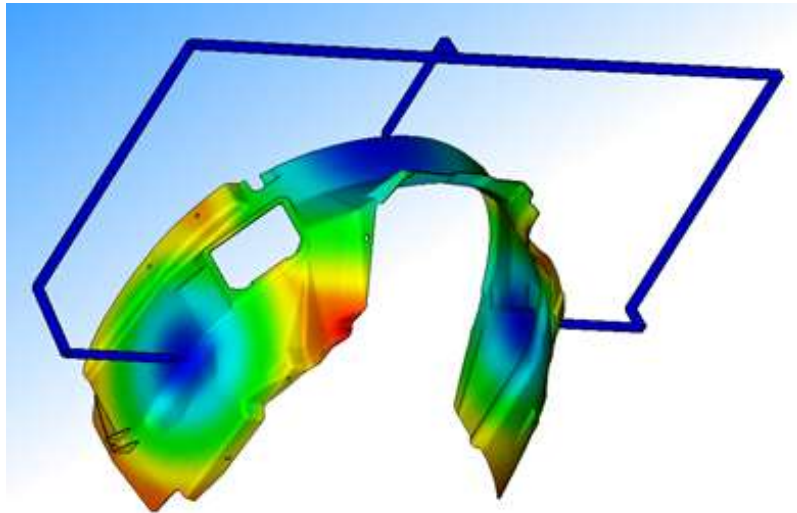


AUTOMOTIVE – Large Moulds: Grills, Wheel Arch, Spoiler

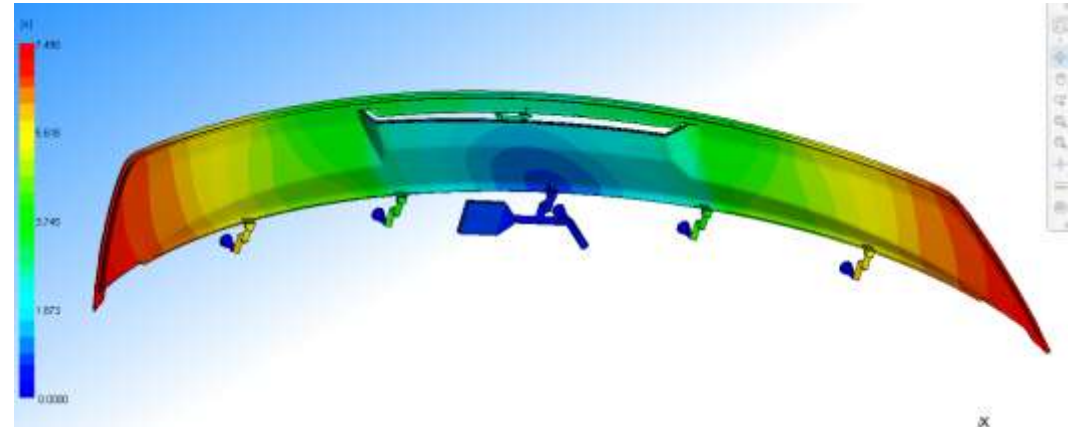


AUTOMOTIVE – SPECIALIZATION

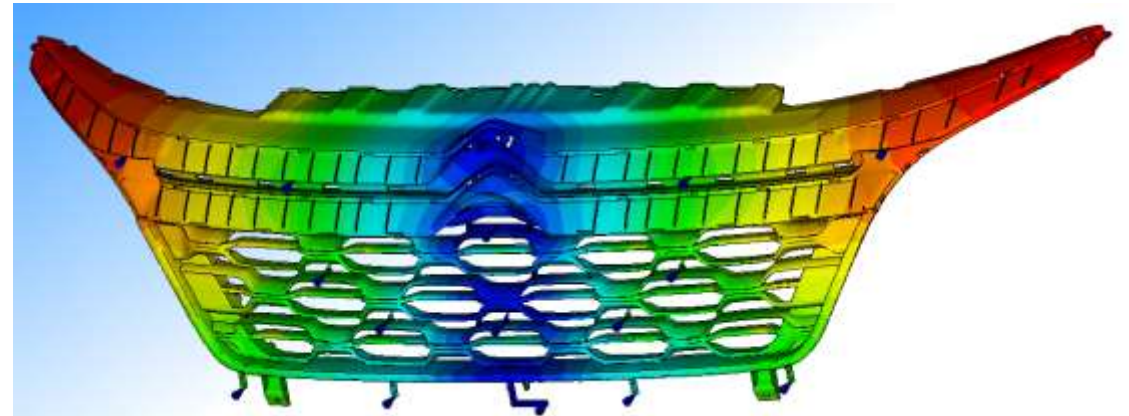
Multiple and Sequential Injection



Wheel Arch



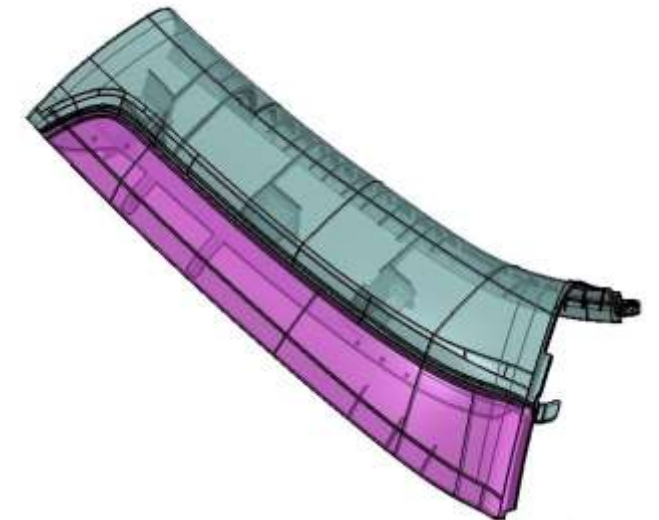
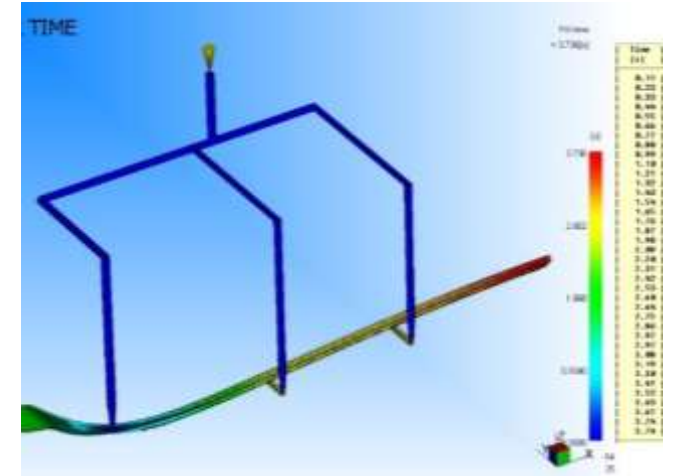
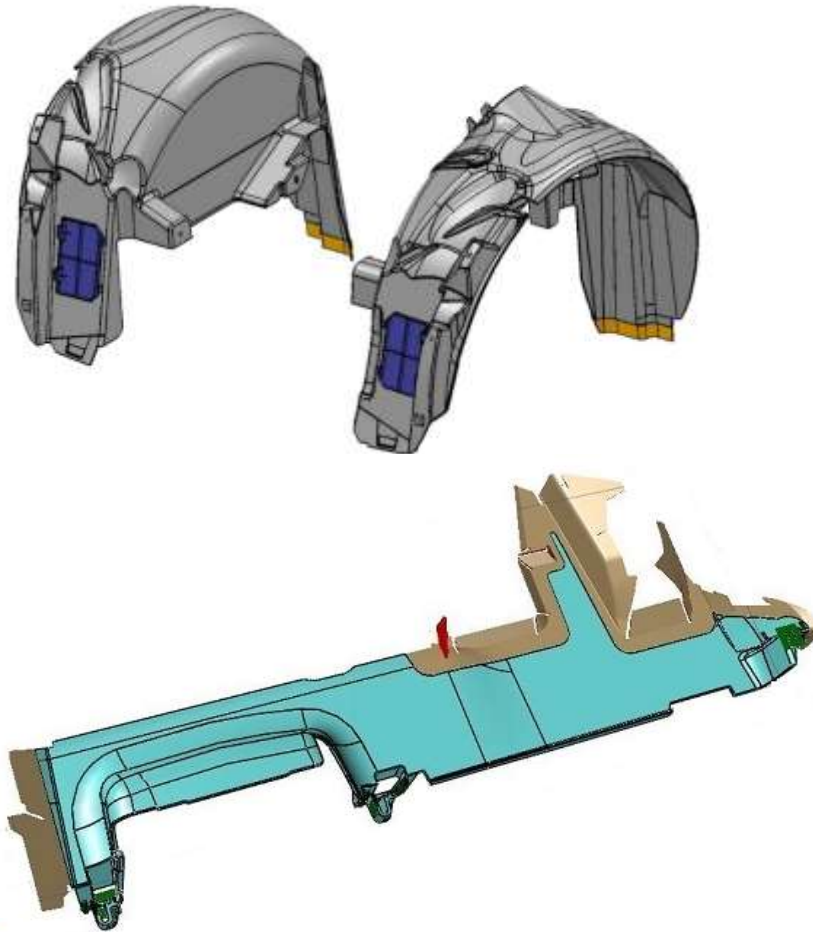
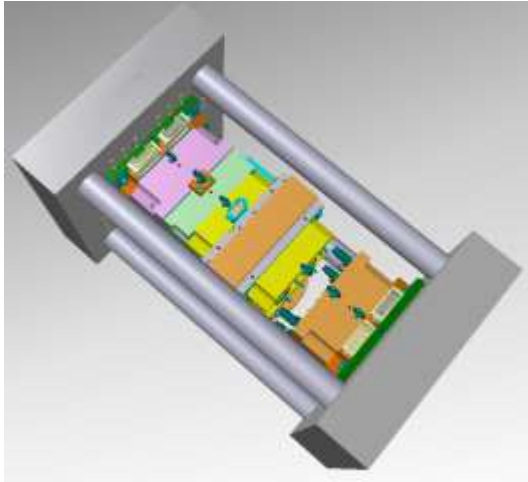
Spoiler



Grills

SPECIALIZATION IN 2K MOULDS

CUBO – TRANSFER - CORE BACK – ROTATING - INDEX



AUTOMOTIVE

2K moulds: CUBO – TRANSFER - CORE BACK - ROTATING

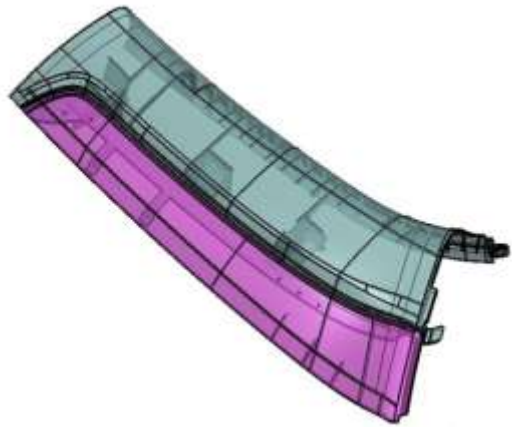


SKODA Flow Regulator with double fix side and translating moving side

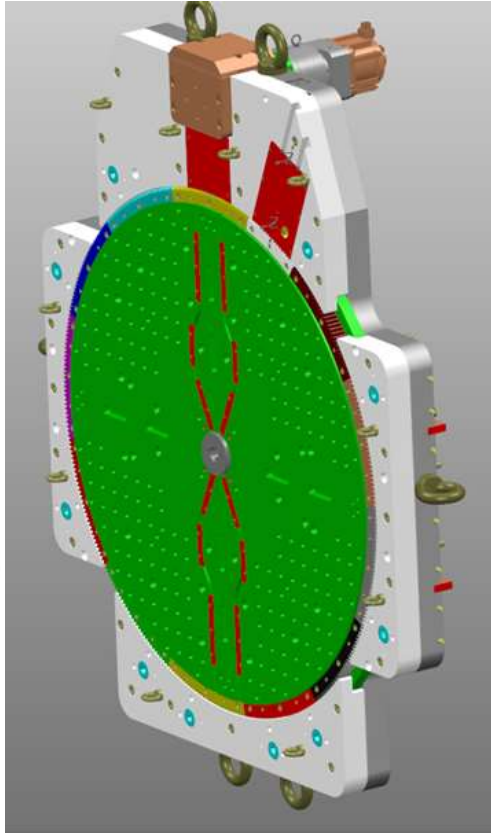
AUTOMOTIVE

2K moulds: CUBO – TRANSFER - CORE BACK - ROTATING

Rotating table
manufactured
by Esistampi

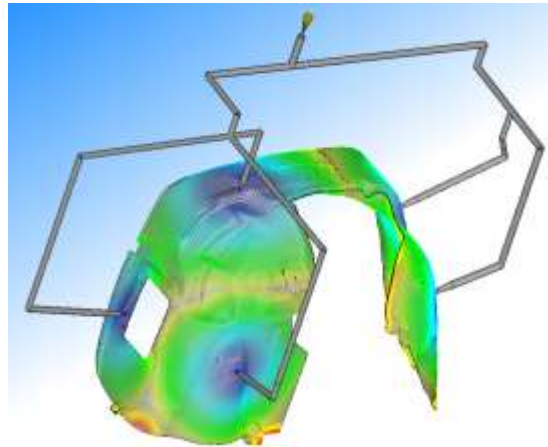
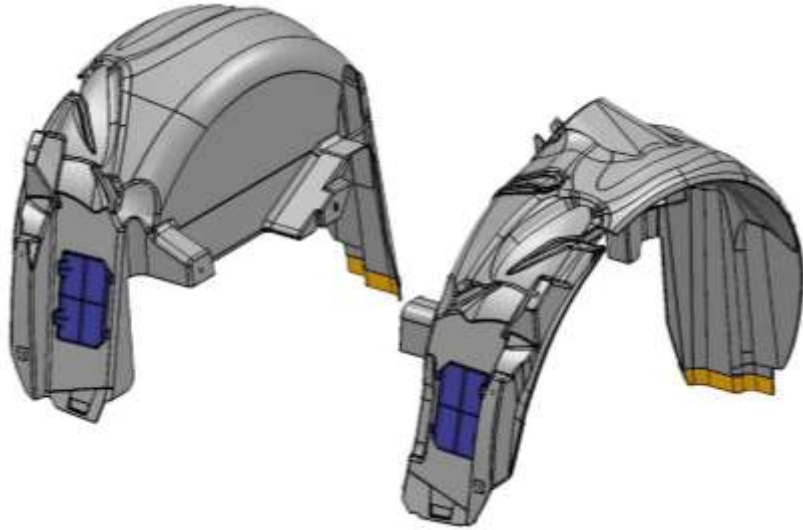


Jeep Renegade Pillar
2 colors



AUTOMOTIVE

2K moulds: CUBO – TRANSFER - CORE BACK - ROTATING



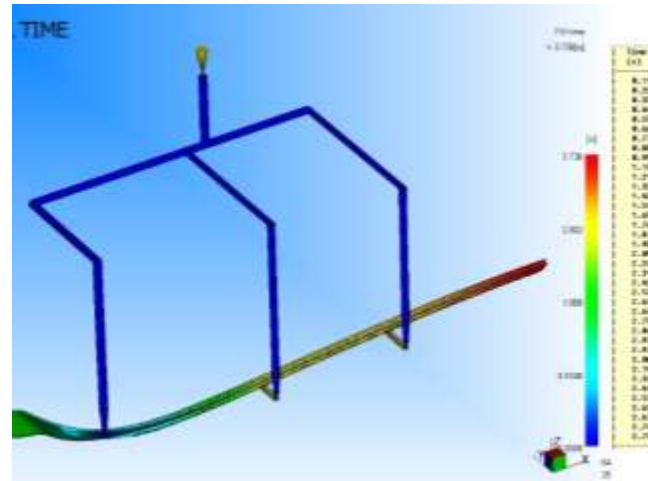
Fiat 500

*2k wheel arch liner
(core back)*



AUTOMOTIVE

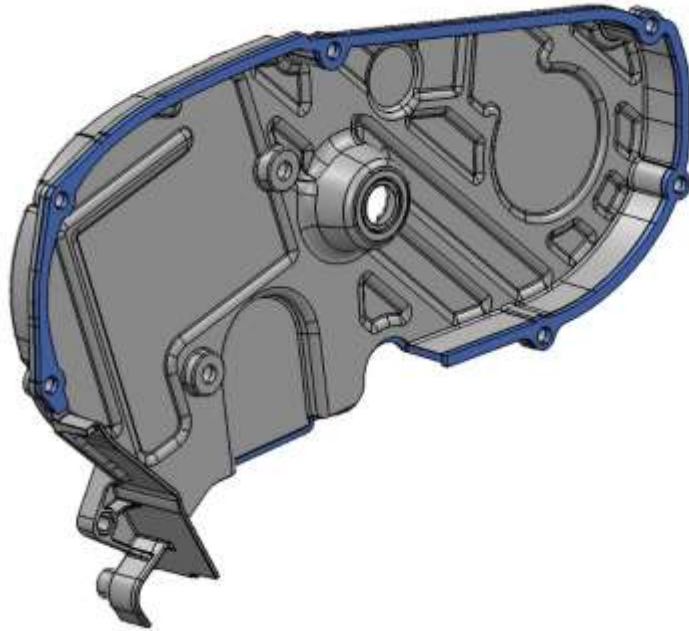
2K moulds: CUBO – TRANSFER - CORE BACK - ROTATING



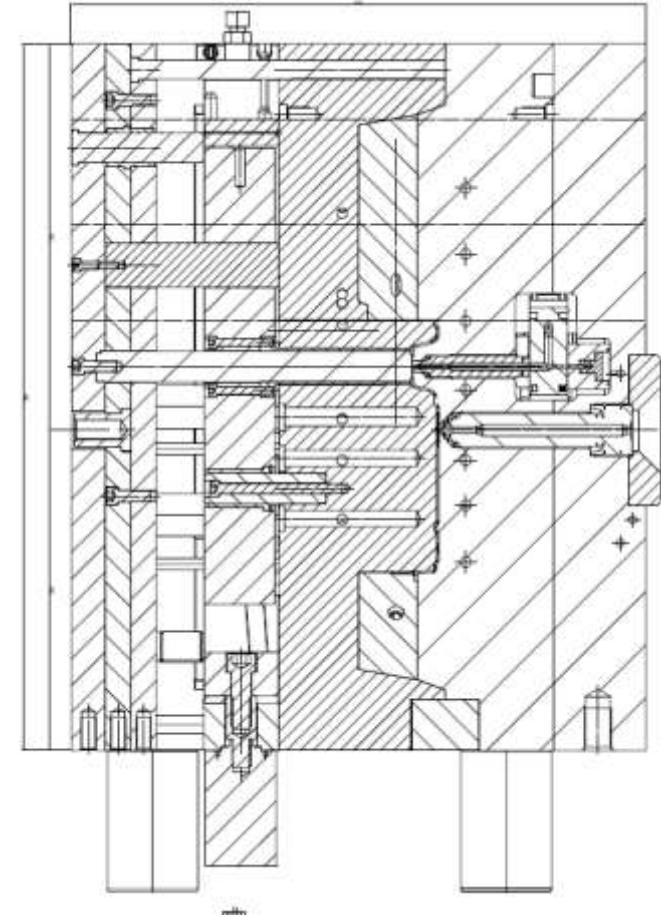
Maserati Levante + Volvo
Trim 2k (rotating table and CUBO)

AUTOMOTIVE

2K moulds: CUBO – TRANSFER - CORE BACK - ROTATING

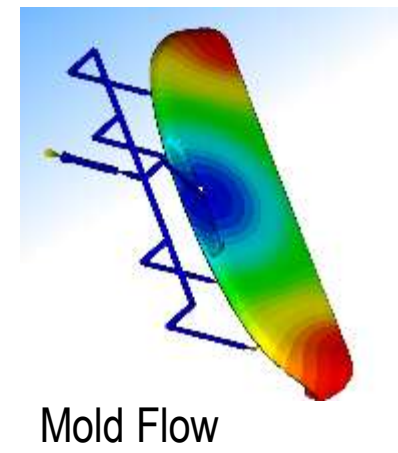
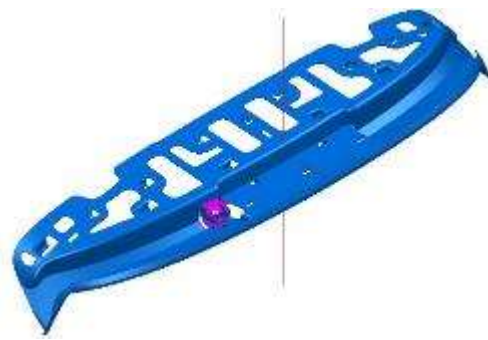


Alfa Giulia
Belt cover2k
(core back)

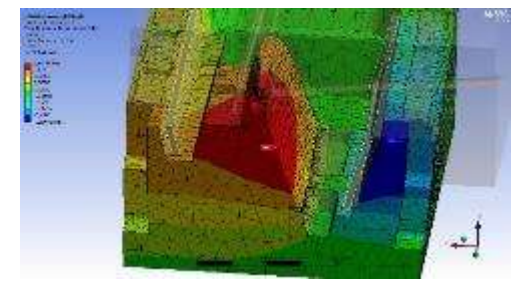


Appendix: CASE HISTORY

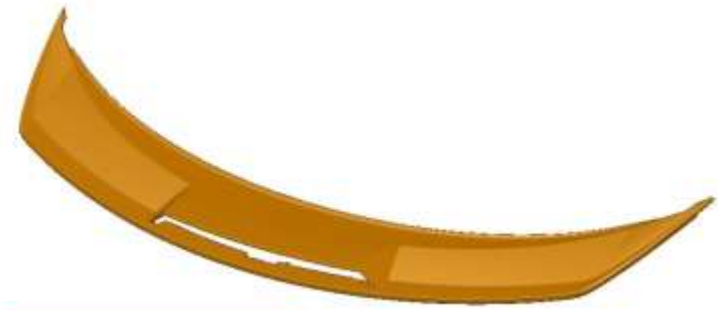
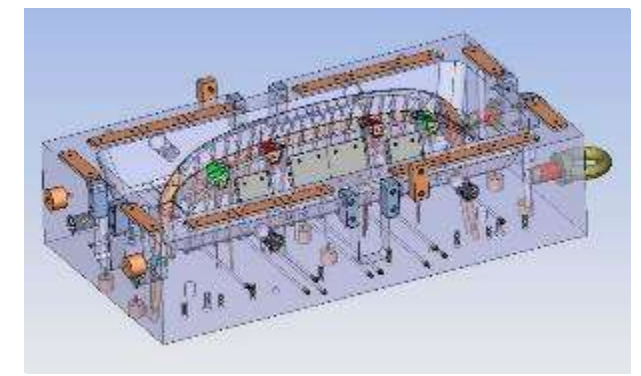
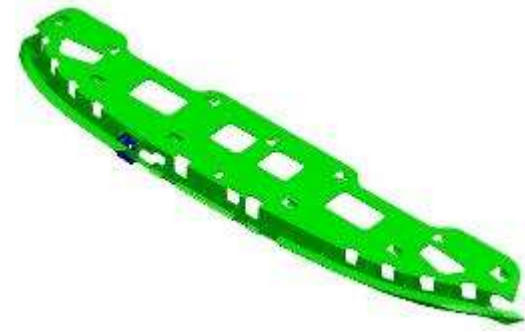
AUTOMOTIVE EXTERIOR - Spoiler



Mold Flow



Steel Stress Analysis



AUTOMOTIVE EXTERIOR – FRONT GRILL



Volvo S60, CX60, V70
2k CUBE TECHNOLOGY



Citroen Jumper
Grill + 2K Chromed trim



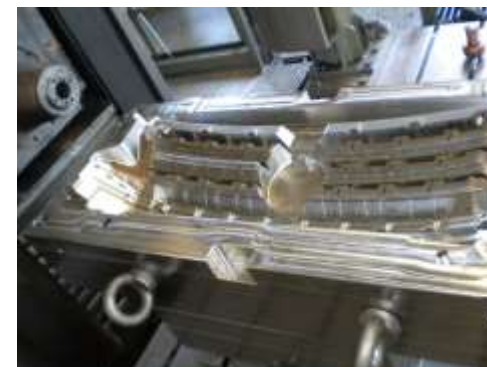
Fiat
Grill + 2K Chromed trim



Alfa Romeo Giulia
Front Shield Assy



Fiat Ducato
Front Grill



VW Caddy
Grill

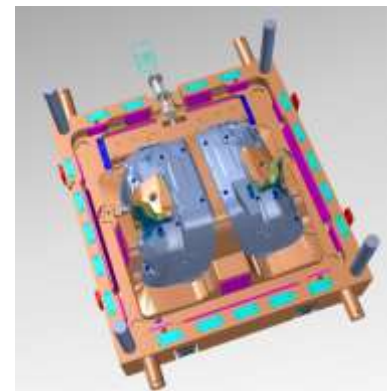
AUTOMOTIVE EXTERIOR



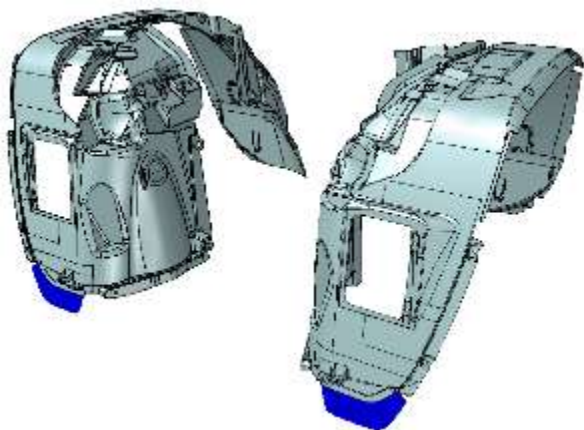
Jeep Renegade e Alfa Giulia
Under window panel



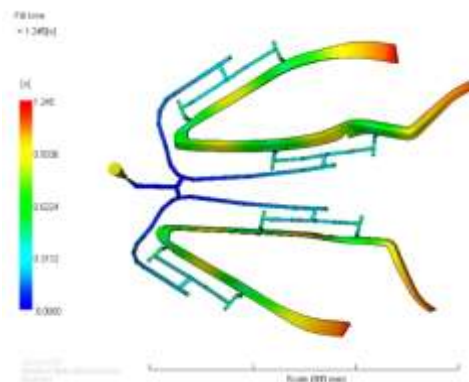
Maserati Levante + Volvo
Window 2k trim (tavola rotante)



Fiat 500
Wheel Arch



Jeep Renegade
2k Wheel Arch



Alfa Giulia
Trim 2k (transfer)



Bentley Bentayga
Wheel arch trim

AUTOMOTIVE INTERIORS e UNDER THE BONNET



Porsche
Air duct



Fiat 500
Seat Cover



Maserati Levante
Tail gate



Jeep Renegade
Pillars



Alfa Romeo Giulia
Belt cover2K



VW Crafter
Dashboard



Skoda
Air flow regulator 2k



Alfa Romeo 949
*Tail gate
(gas injection)*

NON AUTOMOTIVE EXPERIENCE



PAIS

- Industrial
- Food
- Housewares

→ Specialist in IML



BIG BOXES - PALLET

- Light Duty Pallet
- Heavy Duty Pallet
- Industrial Containers
- Agricultural Containers
- Folding Containers



CRATES

- Logistic Crates
- Industrial Crates
- Agricultural Crates
- Bottle Crates
- Folding Crates



WASTE BINS

- 2 wheels (80-360L)
- 4 wheels (600 – 3200L)
- Special Waste

MATERIALS HANDLING EXPERIENCE

BIG BOXES AND PALLETS

CUSTOMERS

Craemer	Helesi
Macroplastics Schoeller	Allibert (Linpac)
Otto	Viscount
Multitank	Wenco
Al Sharq	Femsa



PRODUCTS

Pallet	Industrial containers
Pallet Boxes	Agricultural containers
Folding Containers	Special containers



BIG BOXES AND PALLETS

PRODUCT ENGINEERING

Product design and development

FEM structural analysis for optimal weight/performance ratio

Assembly analysis

Industrialization

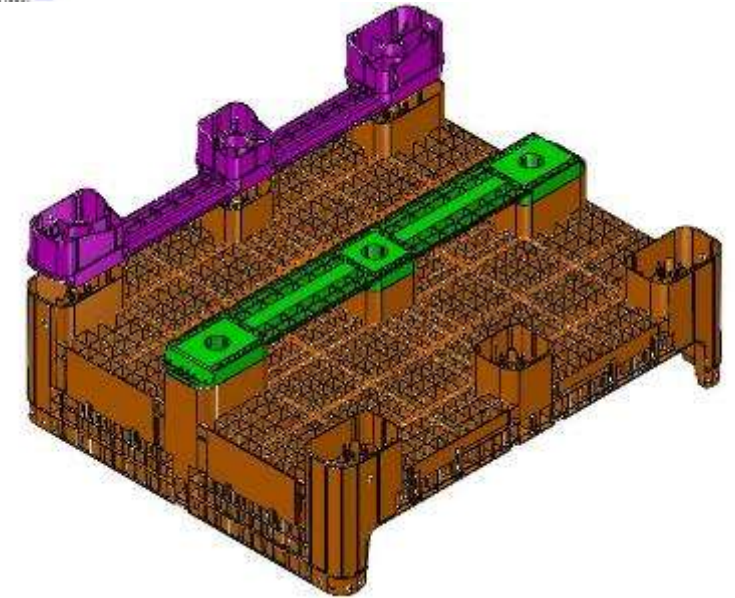
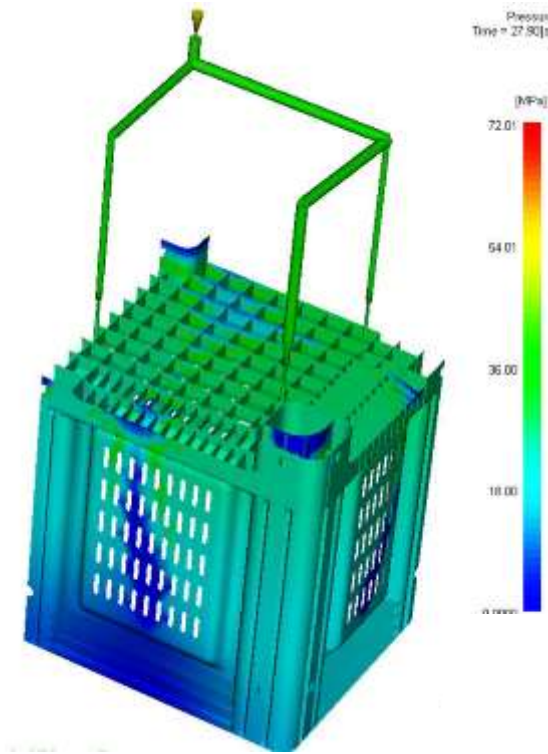
PROCESS ENGINEERING

Warping Analysis

Definition of optimal injection system

Definition of optimal cooling lines path

Use of special materials and inserts



BIG BOXES AND PALLETS

MOULD CONFIGURATION

MULTI VERSION MOULDS

STACK MOULDS

MULTICAVITY MOULDS

MULTIPLE TOOLING PROJECTS



Case History

FOLDING IBC CONTAINER

1 cavity tool for Base 1000 x 1200 x 356

1+1 cavities tool (sandwich) for Short Walls 1000 x 1200

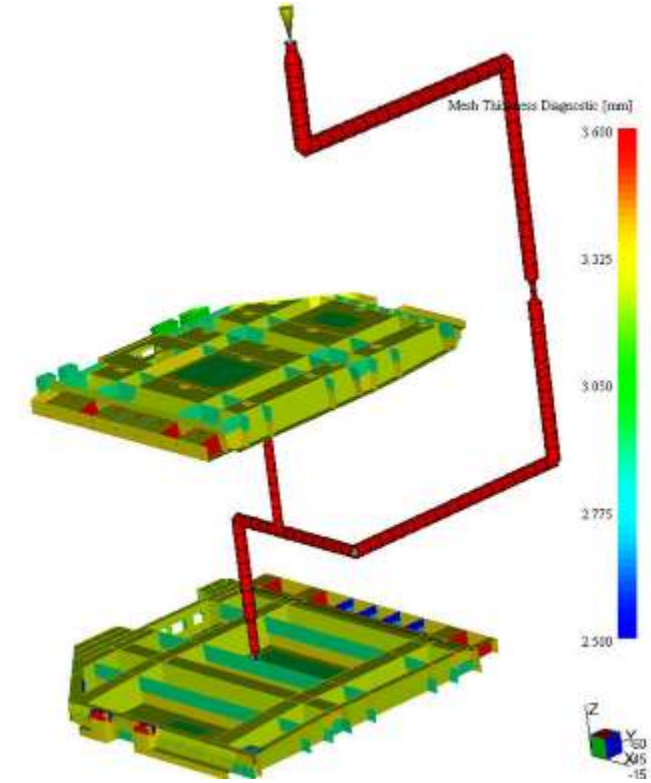
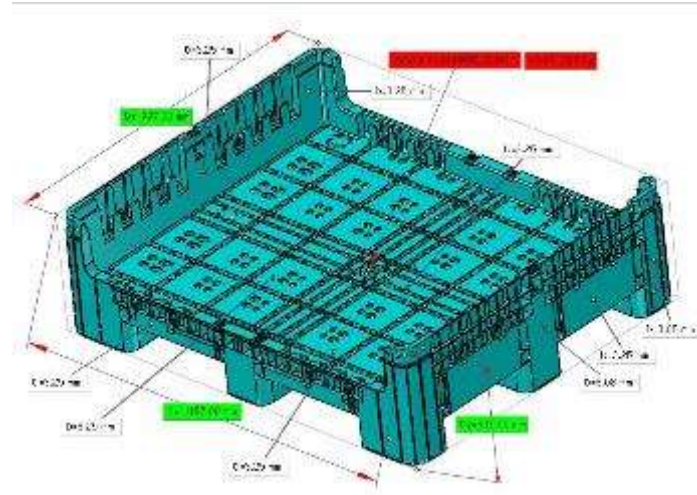
1+1 cavities tool (sandwich) for Long Walls 1000 x 1200

1+1 cavity injection tool for Door for Long walls 800 x 1200

2+1 cavities injection tool for Skids for IBC Container 800 x 1200

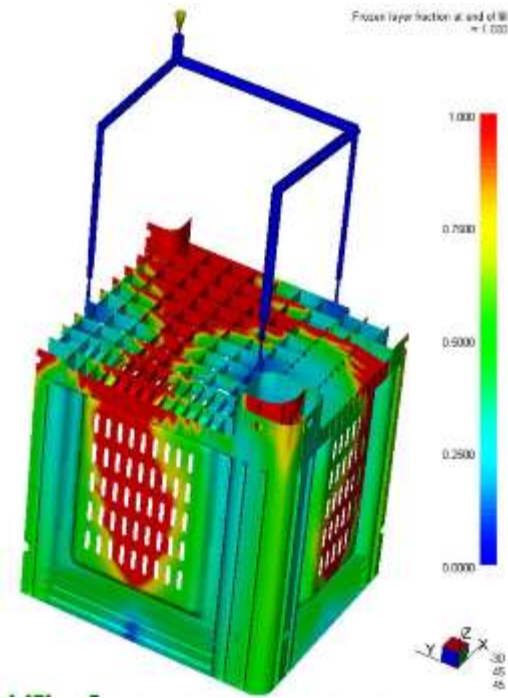
Base clamping force: 3000T; cycle time: 150"

Walls clamping force: 1200-1500T; cycle time: 50"



Case History

BIG BOX 800/1000/1200 X 625/760



Case History

MACRO BIN 48

It is the biggest monobloc bin ever manufactured. External dimensions are: 1.222,4 mm (L) x 1.222,4 mm (W) x 1.333,5 mm (H), tare of 81,6 kg (+/- 5%), moulded with an horizontal 8000T injection machine.

Considering the constructive, dimensional and structural complexity, the tool entered production after only one trial.

110T

TOOL WEIGHT

8000t

CLAMPING FORCE



Case History

PALLET

Very high performance pallet, both for its load and its impact. Manufactured in two parts (top and bottom) welded.

The high performances are matched with its competitive weight, thanks to a focused use of expanding agents.

49''

BOTTOM TIME
CYCLE

-10%

WEIGHT REDUCTION
FOR EXPANDED



MATERIALS HANDLING

CUSTOMERS

Schaefer

Sacmi

Linpac

Perstorp

Femsa

Allibert

Al-Sharq Factories

Otto

Palec Ecologico

Nilkamal

PRODUCTS

Stack-Nest Containers

Industrial Containers

Folding Containers

Agricultural Containers

Bottle Crates



MATERIALS HANDLING

PRODUCT ENGINEERING

FEM structural analysis for optimal weight/performance ratio

Assembly analysis

Industrialization

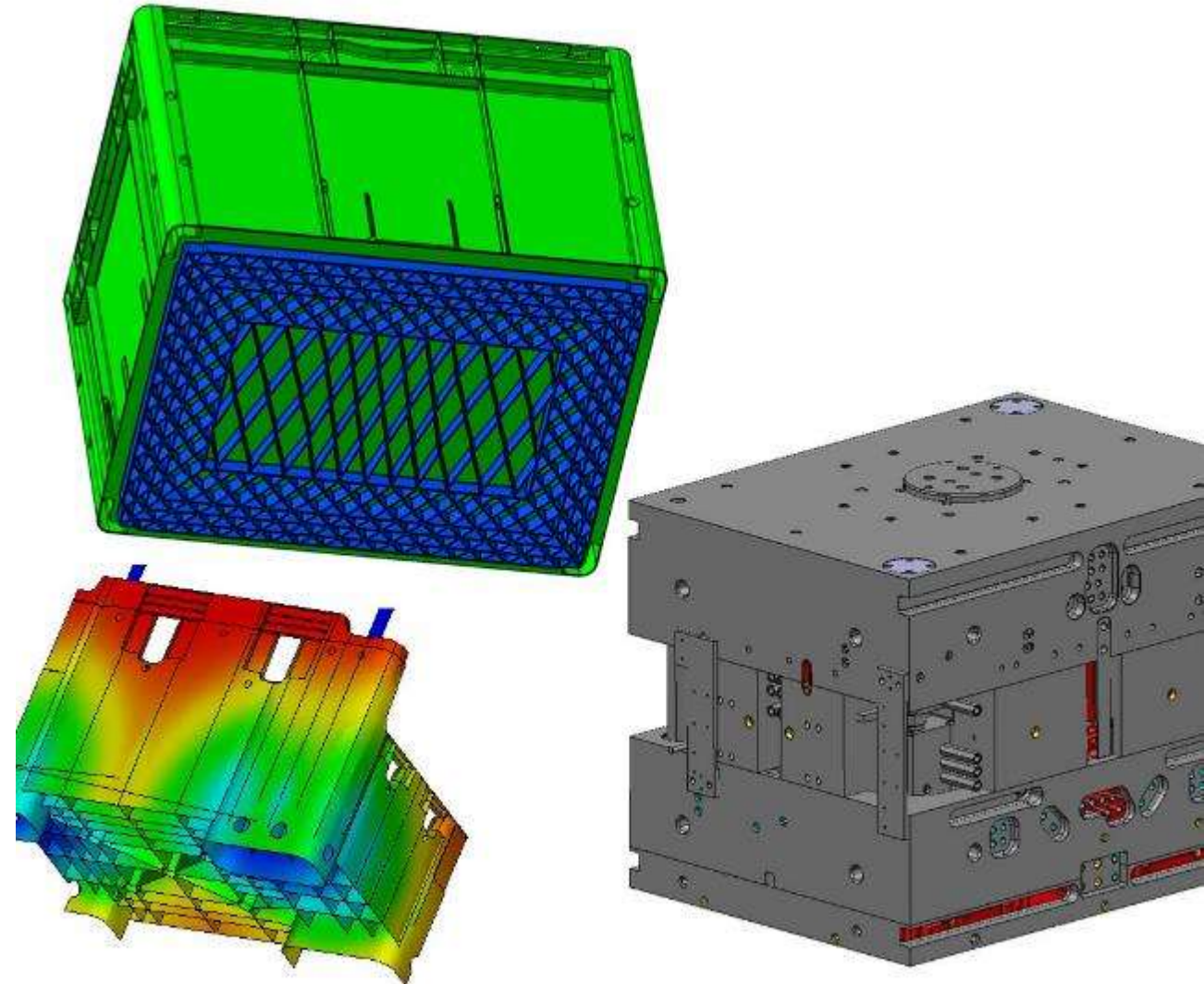
PROCESS ENGINEERING

Warping Analysis

Definition of optimal injection system

Definition of optimal cooling lines path

Use of special materials and inserts



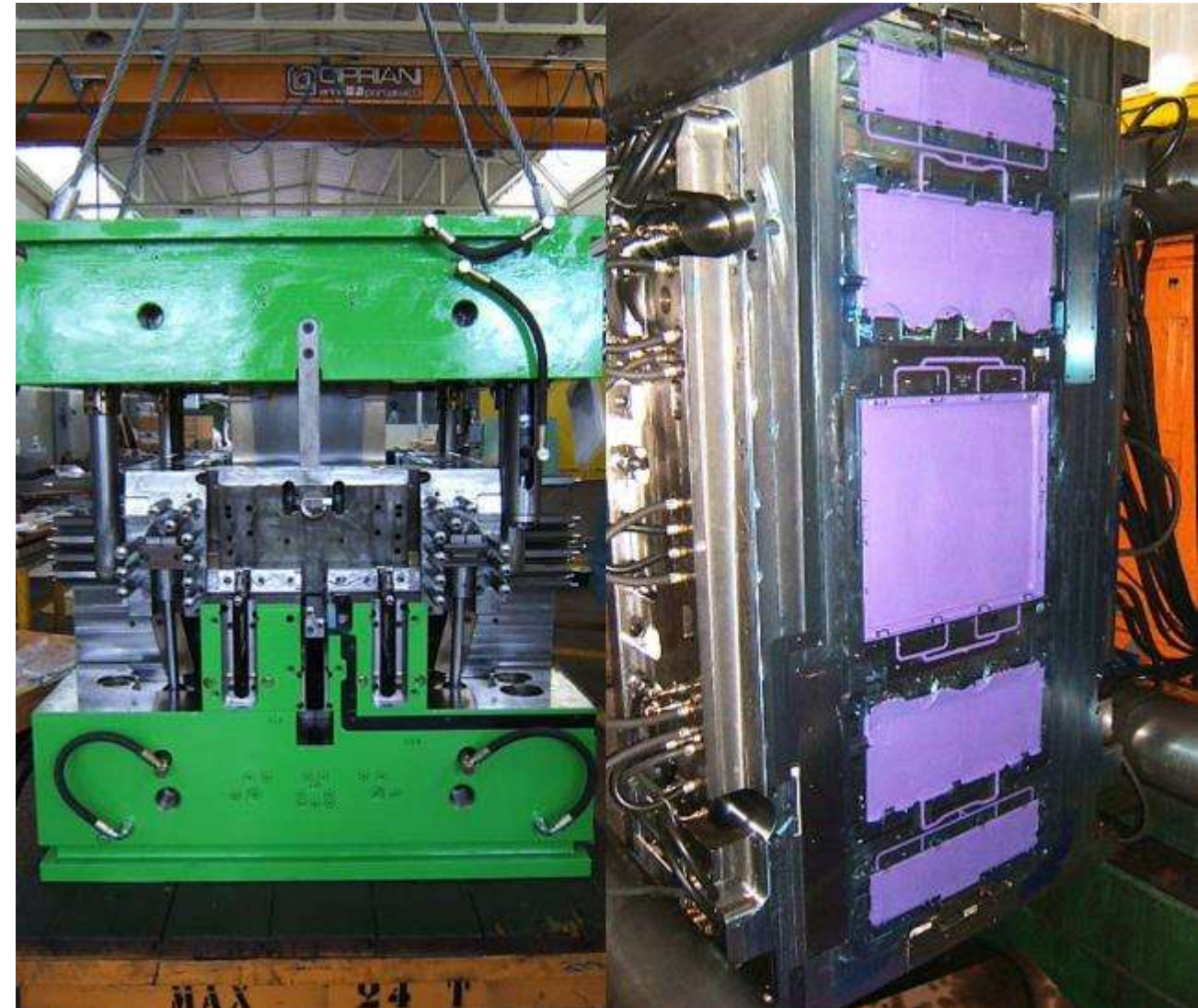
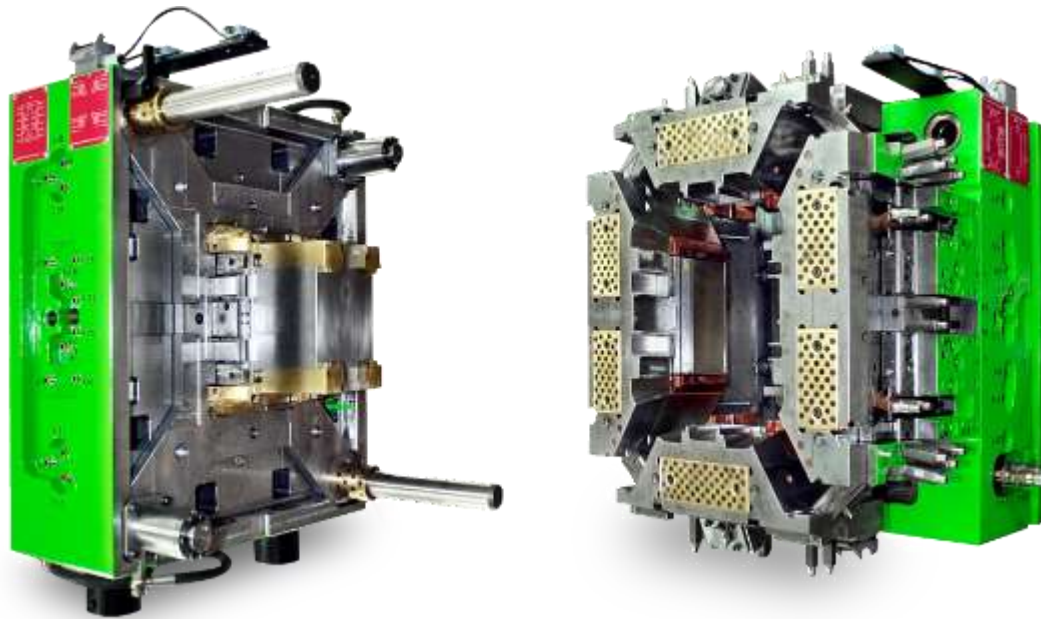
MATERIALS HANDLING

MOULD CONFIGURATION

STACK MOULDS

MULTICAVITY MOULDS

MULTIPLE TOOLING PROJECTS



WASTE CONTAINERS EXPERIENCE

SES - HISTORY OF A MARKET LEADER

W-Weber

CONTENÜR

CRAEMER

ESE

FEMSA

HELESI

MACROPLASTICS™

PLASTIC OMNIUM

REHAU

SCHAEFER



Schoeller Allibert

SULO

**mgb
PLASTICS**

**VISCOUNT
PLASTICS**

WERIT

MOULDS

Size	BIN	LID
120-140	39	24
180- 240	50	23
360	15	10
660-770	10	6
>1000	6	9

SES – ESISTAMPI 2014

The acquisition of SES allowed the combination of the **know-how in the waste bins market** with the **flexibility and competitiveness** of the new owner.



STRATEGY

To restore, consolidate and further develop the LEADERSHIP in this sector, by means of **innovative and competitive solutions specifically dedicated to each customer's needs.**

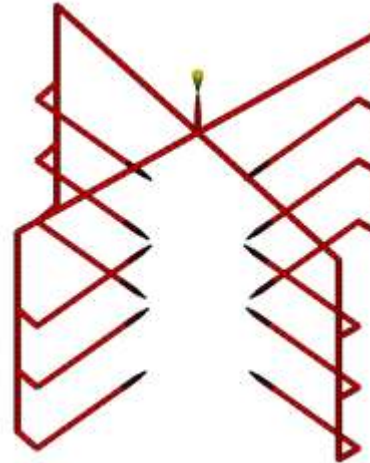


ENVIRONMENT: ESISTAMPI-SES STUDY FOR WEIGHT REDUCTION

Esistampi has performed a detailed MoldFlow Study to compare PROS and CONS of alternative injection solutions for waste bins:

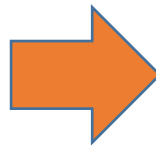
Single injection on the base

Multiple injection: 4 (walls) + 1 (base)
4 on walls
8 sequential on walls centre
8 sequential on walls corners
12 sequential on walls centre
12 sequential on walls corners



ASPECTS TO BE CHECKED

- Weight saving
- Clamping force
- Color change
- Mould stiffness → FEM Analysis
- Number and position of gates
- Hot runner and nozzles dimension
- Product performance



*BEST SOLUTION
FOR EACH
SPECIFIC PROJECT
ACCORDING TO
CUSTOMER NEEDS*

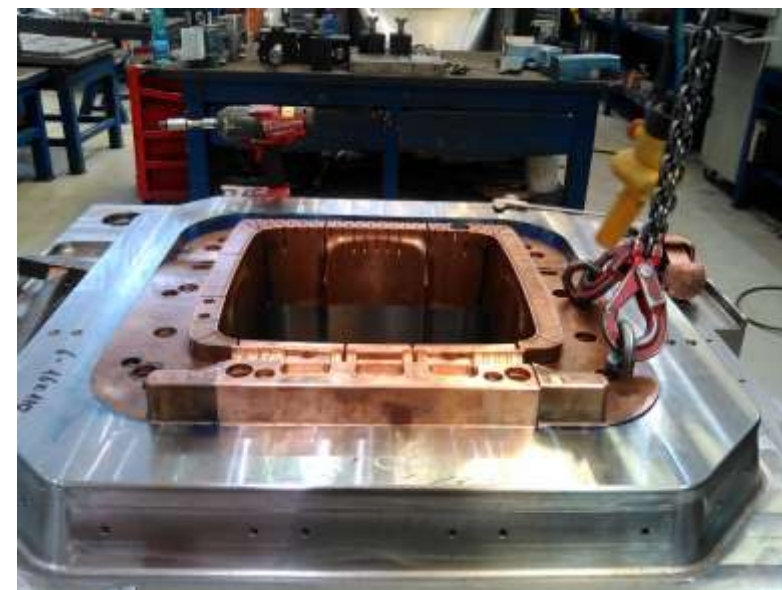
In 2016 we received the following orders :

- three 120L bodies;
- two 120L lids;
- one 240L body;
- one 240 lid;
- two 360 bodies;
- one 360 lid;
- one 1100L body.

Some of them have been delivered; some have been tested, and the others are in progress. We are glad that the waste bin market confirmed trust in Esistampi-SES



120L bin NEW



120L bin
STD



360L bin



1100L bin

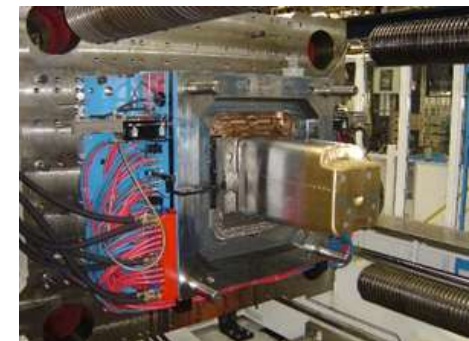


SERVICES

Thanks to this new organizational model, Esistampi can support its customers, with a high added value, for the whole development process of the project, assuming the technical / economic responsibility according to the turnkey approach:

- ENGINEERING
- SIMULATION
- DFM
- MOULD DESIGN
- MOULD MANUFACTURING
- TRIAL AND TUNING
- SOP AT CUSTOMER PREMISES

NORMA EUROPEA	Contenitori mobili per rifiuti e riciclo Parte 1: Contenitori a due ruote con capacità fino a 400 l per dispositivi di sollevamento a pettine - Dimensioni e progettazione	UNI EN 840-1
		GENNAIO 2013



Case History

THIN WALLS BIN

The great experience reached by SES in the manufacturing of waste bins, has allowed us to find **technical solutions** relative to the injection system and the pressures distribution, being able to **reduce to a minimum both the article's weight and the time cycle.**



Case History

WASTE BIN

It's one of the biggest monobloc injection waste bins ever manufactured.

The product has been industrialized to optimize both the structural and functional performances of the product, and the productivity and reliability of the tool.

3200l

WASTE BIN
CAPACITY

185T

TOLL WEIGHT



PAIL AND SMALL CONTAINERS EXPERIENCE

PAILS AND CONTAINERS

PRODUCT & PROCESS ENGINEERING

Product design

FEM structural analysis for optimal weight/performance ratio

Warping Analysis

Definition of optimal injection - cooling system

Use of special materials and inserts

MOULD DESIGN AND MANUFACTURE

Multi-cavity moulds

Family moulds



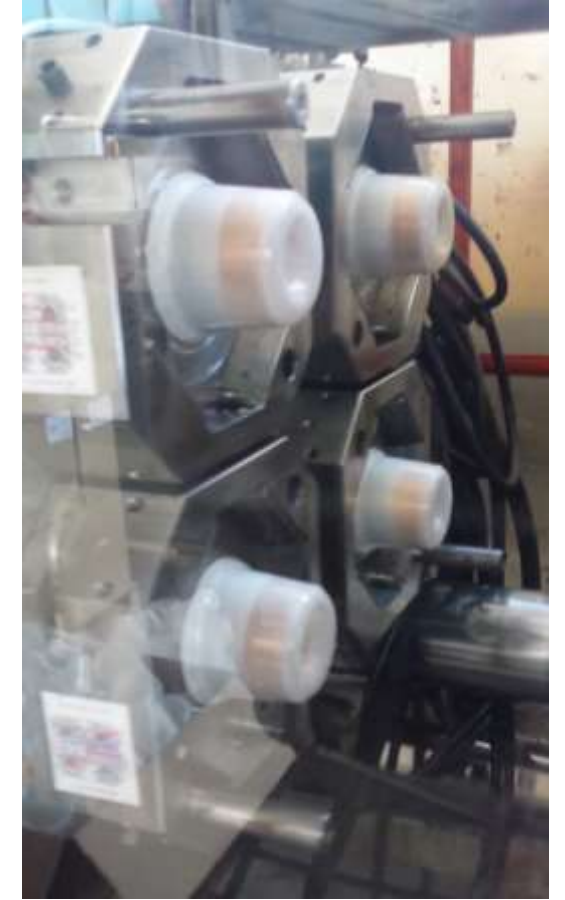
Case History – Thin Walls Container with IML



1 kg container with IML
(Ecuador)
Material: HDPE
Wall thickness: 0,7mm



Mould dim.: 750X690X650
IM: 430T
Cycle: 6" – 7"



Case History – 18lt Pail Single Cavity Mould



Pail 18 lt for mineral oil
(Venezuela)
Material: HDPE

Mould dim.: 690x690x850
Mould weight: 3.000 Kg
IM: 700T
Cycle: 23" – 27"



Case History – 18lt Pail Lid Single Cavity Mould

Lid 18 lt for mineral oil
(Venezuela)
Material: HDPE



Mold to produce 18 lt lid
for mineral oil
(Venezuela)
Mould dim.: 496x496x474
Mould weight: 1.000 Kg
IM: 400T
Cycle: 23" – 27"



Case History – 4lt Pail Four Cavities Mould



Pail 4 lt. for paint
(Peru)
Material: PP

4 cavities mould to produce 4 lt. Paint pail
(Peruvian market)
Mould dim.: 980x880x715
Mould weight: 4.570 kg
IM: 750T
Cycle: 14" – 16"



Case History – 3,5 Gallons Pail Two Cavities Mould



Pail 3.5 gallons, 2 cavities
(USA)
Material: HDPE

2 cavities mould to produce 3.5 gallons pail
(American market)
Mould dim.: 726x1280x863
Mould weight: 5.800 kg
IM: 700
Cycle: 18"-20"



Case History – Complete Set of Oil Pails



Complete set oil container molds
(Venezuela)
(pail, cover, cap, flex cap, handle)
Material: PEHD - PELD



Case History – Medical Bin Cover 2+2 Cavities Stack Mould



Medical cover 2+2 cavities
(Italy)
Material: HDPE

2+2 cavities stack mould
for medical cover
(Italian market)
Mould dim.: 740x1270x986
Mould weight: 6.000 kg



Case History – Medical Bins

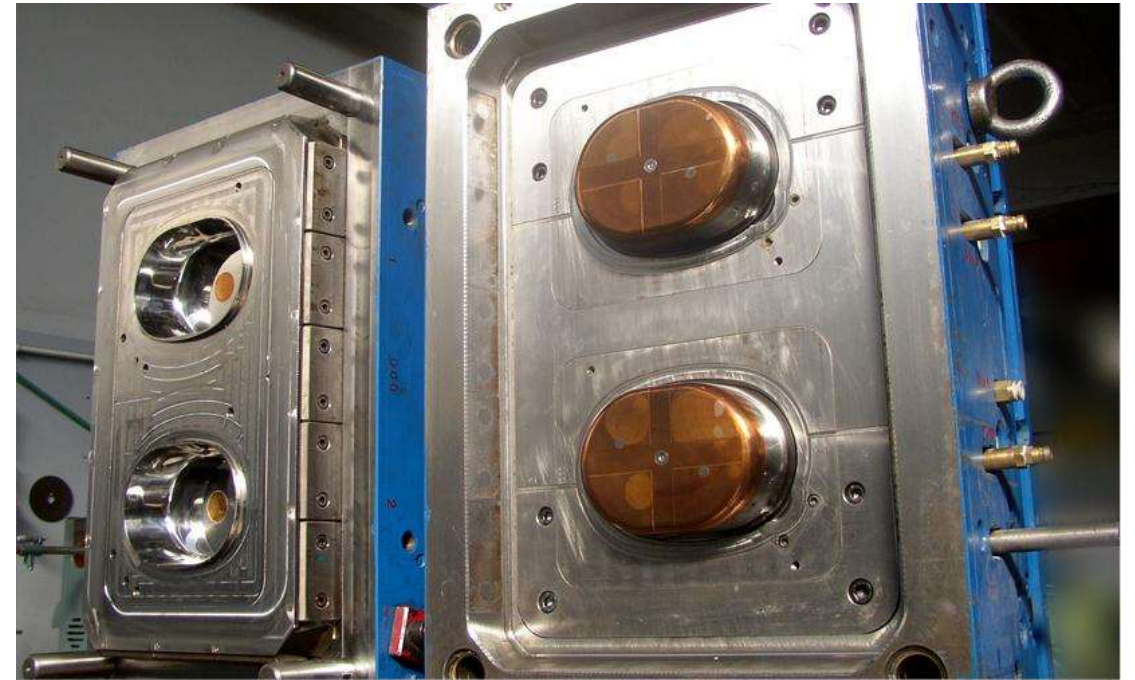


Medical containers
(Italy)
Material: HDPE

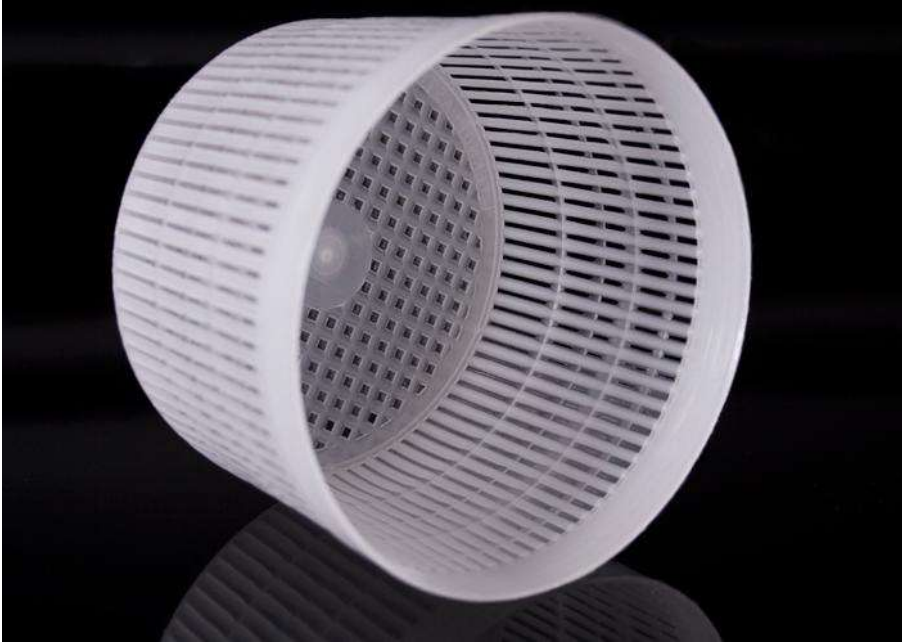
Case History – Ice Cream Container



Ice-cream container, two cavity mould



Case History – Cheese Container



Cheese container
Material: PP



Mould for cheese container
Mould dim.: Ø385x548
Mould weight: 497 Kg.

Case History – Housewares Containers



Cylindrical containers
Material: PP



Rectangular containers
Material: PP

SPECIAL PROJECTS

THICKNESS

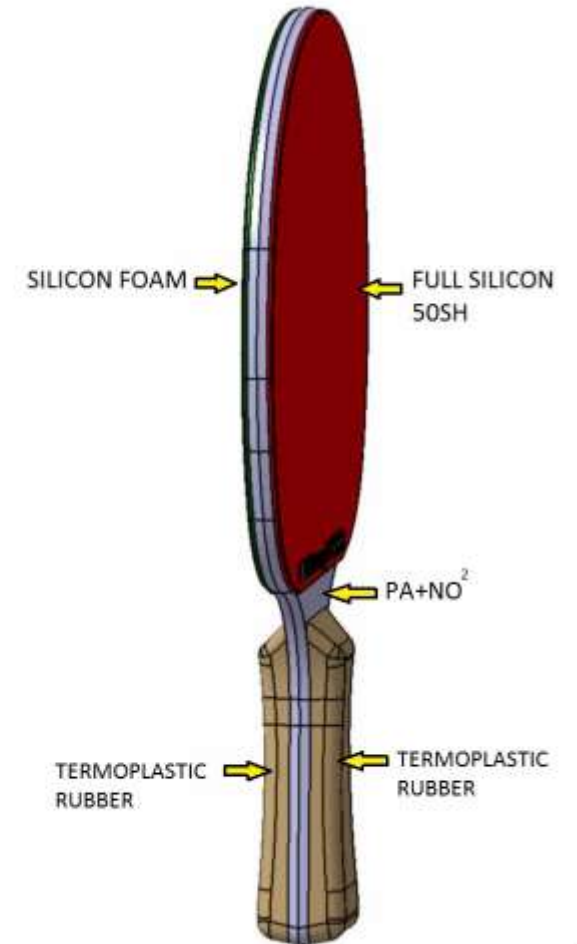
Protectors



MULTI MATERIALS + SILICON

Ping Pong

Paddle



THANK YOU

www.esistampi.it

www.IntercoexGlobal.com

INTERCOEX
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INJECTION MOULD **ses**

INTERCOEX