



YOUR
TECHNOLOGY
ADVISOR

Customer References

Glass bottle moulds design

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›Finished mold

Realised with
an automatic configurator
and integrated
FEM analysis



Index

›01

Client presentation

›02

Case presentation

›03

Techniques used

- ›Designing the entire mould using Top Down Design
- ›Designing the bottle with a focus on minimum details
- ›Automatic real time calculation of volume using BMX
- ›Layout Files for parametric management of the configurator
- ›FEM analysis of the bottle with Creo Simulation Advanced

›04

Conclusions

›01 Client for whom the project was developed

Strada Moulds Srl, a company that has been in the business of designing and producing glass bottle moulds for more than 3 generations.

Established in 1945, its moulds today are used by most manufacturers of IS standard bottle-making systems and for all types of manufacturing process.



>02 Objective to be reached for the client

- >Creo Parametric Essentials
- >Creo AAX (Advanced Assembly Extension)-Creo Simulation
- >Creo BMX (Behavioral Modeling Extension)



Develop a working method that allows greater control in all phases of the mould design cycle, from defining the bottle to identifying the characteristics of the relative mould.



Search for high quality and standardisation in the 2D documentation dedicated to Production Operations.



Analyse the production scenarios requested by the buyer in the various phases of development.

>03

Techniques used

Designing with an overview
Top down design

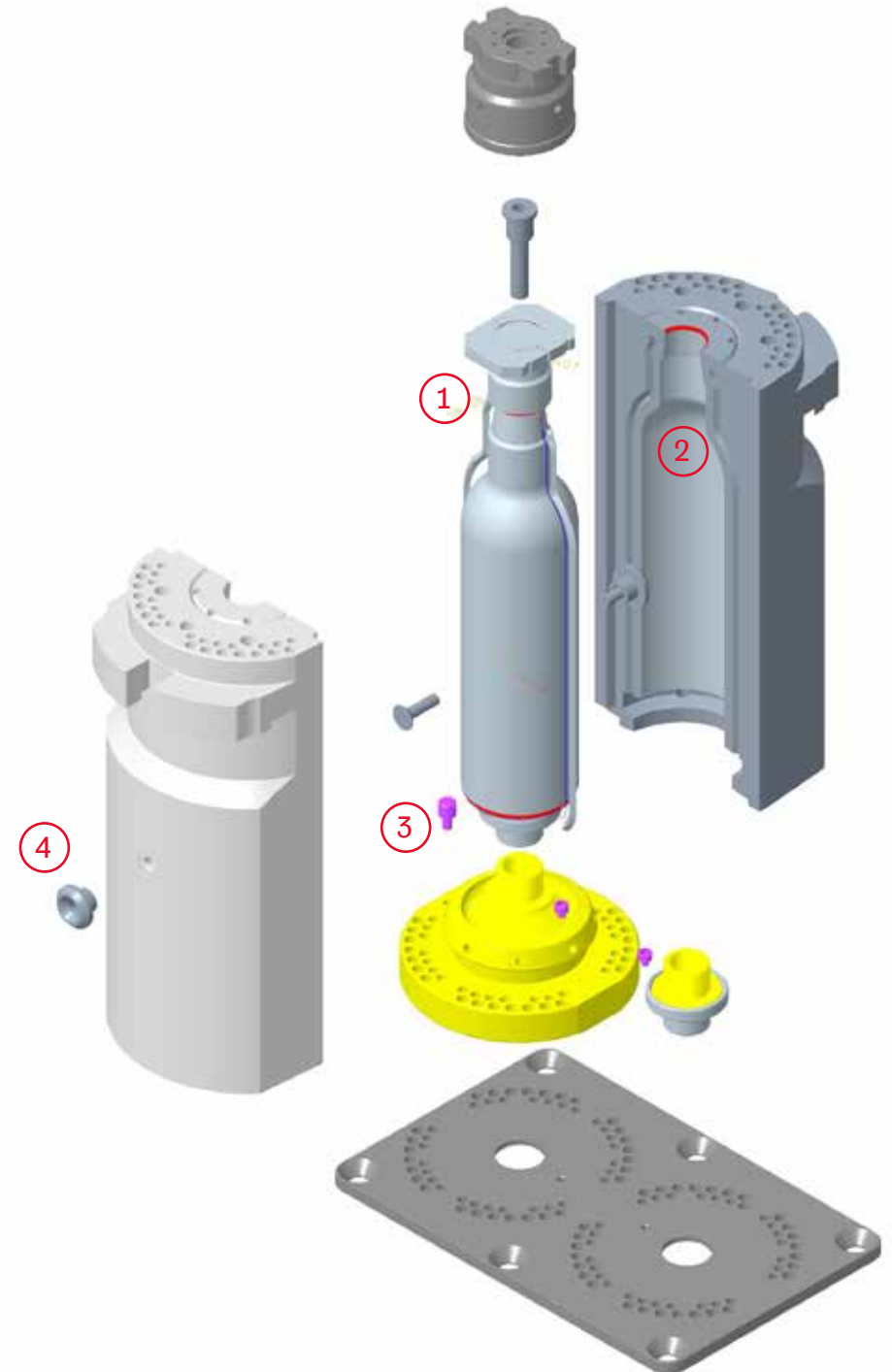
>Automatic and parametric creation of the mould cavity and base (= always correct and up to date), starting from the bottle profile.

① ②

>All components can be immediately seen at a glance

③ ④

>It is easier to spot interferences



›03

Techniques used

Designing a bottle
in all its details

- ›A faithful reproduction of reality
- ›More accurate analysis of any critical conditions such as:
 - ›Setting out markings on the bottle body - [wrap and toroidal bend feature]
 - ›Simulating contact zones on aligned bottles
 - ›Simulating dimensions and checking compatibility between the rough phase and the definitive one [copy geometry feature]
 - ›Real time volume analysis upon each geometrical modification [BMX features]



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Techniques used

layout for parametric management
of the mould

- ›A faithful reproduction of reality
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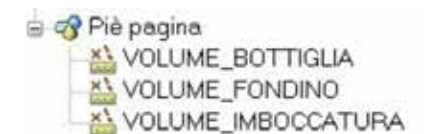
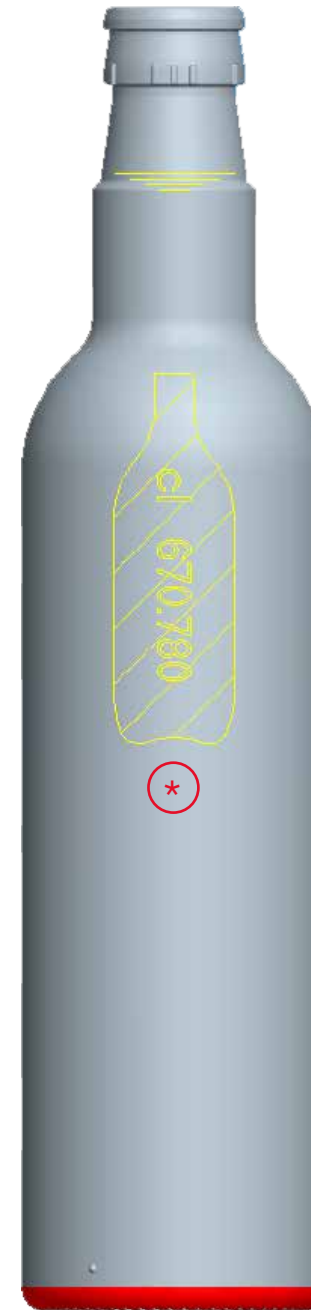


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›03

Techniques used

layout for parametric management
of the mould

›A data sheet integrated within
Creo Parametric Essentials
containing the information necessary
for configuring the entire mould,
separated according to:

- ›Functions
- ›Components
- ›Areas and specific
characteristics of the mould



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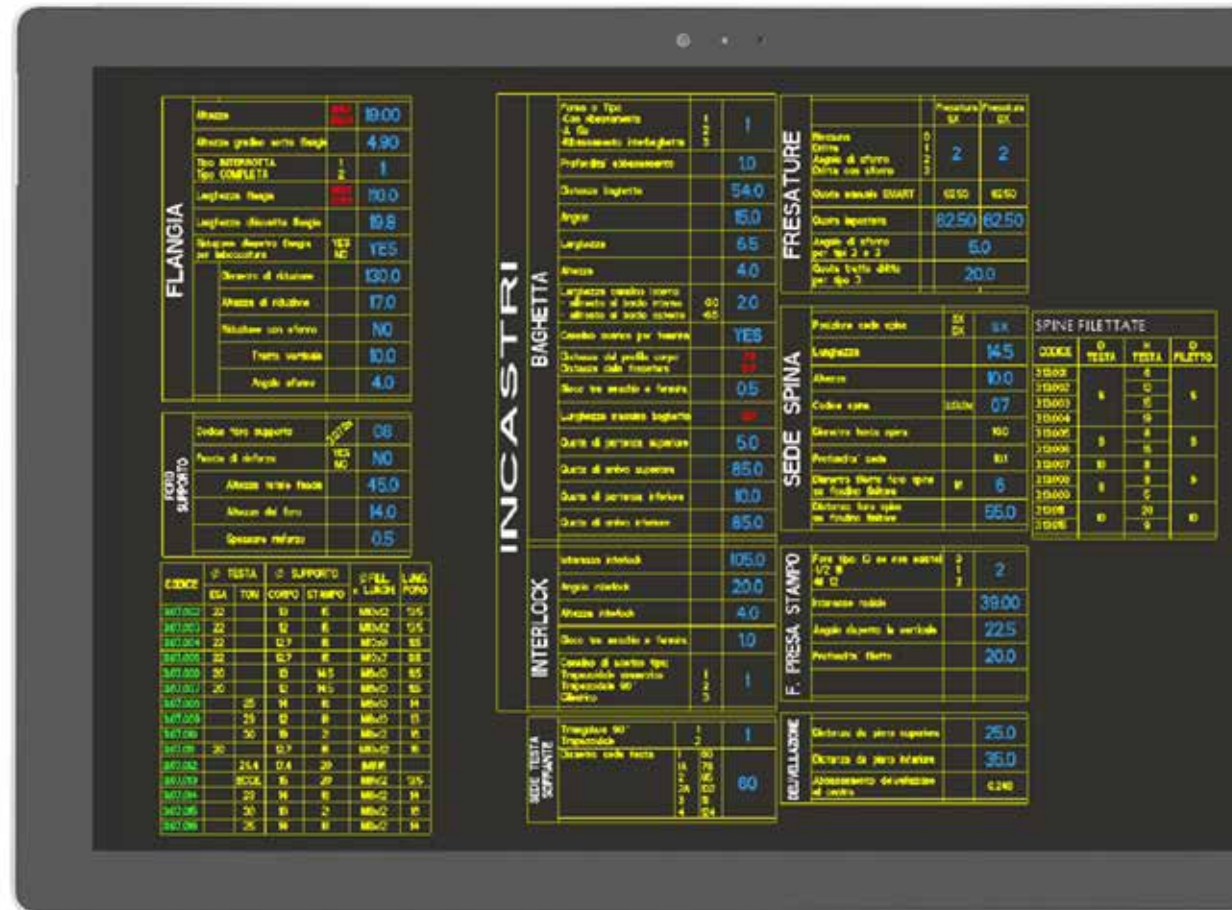
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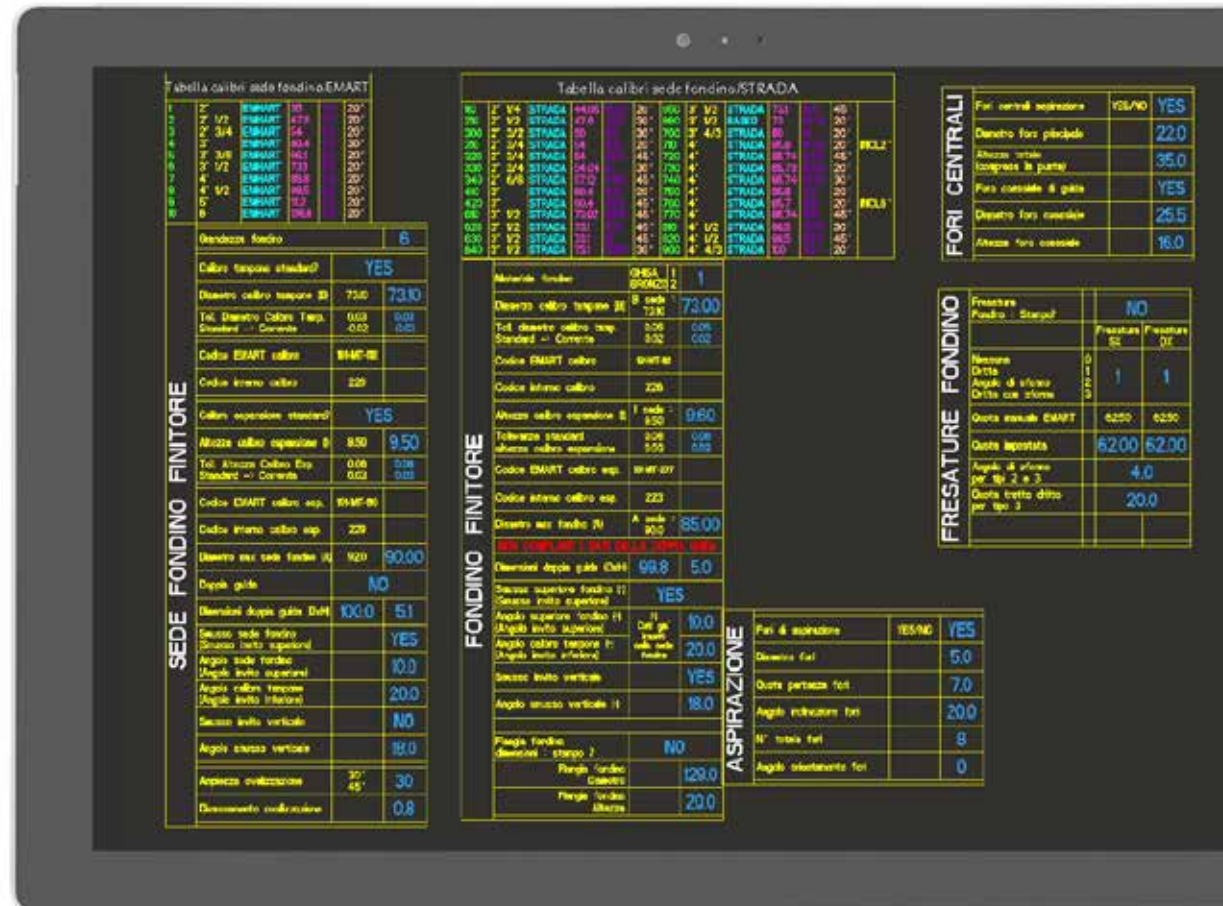
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FORI VERTY FLOW			
Indice fori Verty Flow	1 - 34	35	
Cliente -Macchina -Stampo	resnova - 5 - 5/8		
Diámetro di giocitura 1	Fila 1	104.00	
Diámetro fori 1		5.0	
Angolo partenza fori 1		18.0	
Tabella di serie		N17 PS AB	
Tabella di serie fila 2	YES	N16 PS A225	
Tabella di serie fila 3	NO	N12 P150 A15	
Tabella di serie fila 4	NO		

TABELLA FORI VERTY FLOW				
N°	INDICE	CLIENTE	MACCHINA	STAMPO
1		Bunkev	5" 1/2	5" 3/8
2		Bunkev	5" 1/2	6"
3		Crystal Fior	5" 1/2	6"
4		Crystal Fior	5" 1/2	6"
5		Crystal Fior	6" 1/4	6" 7/8
6		Druje	4" 1/4	4" 5/8
7		Druje	4" 1/4	4" 5/8
8		Druje	5" 1/2	6"
9		Druje	5.0	N° 5
10		Empol	5" 1/2	6"
11		Empol	5" 1/2	6"
12		Empol	5.0	N° 5
13		Gulf	4" 1/4	4" 5/8
14		Gulf	4" 1/4	4" 5/8
15		Gulf	5"	6"
16		Ostara	6" 1/4	6" 5/8
17		Rosco/Busche	5" 1/2	6"
18		Reutera/World	5" 1/2	6"
19		Vedapack	6" 1/4	6" 5/8
20		Zoujaj	4" 1/4	4" 5/8
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23		Pogarese	6" 1/4	6" 5/8
24		Pogarese	5" 1/2	6"
25		Tioule	5" 1/2	6"
26		Tioule	4" 1/4	4" 5/8
27		Reutera GPS	5"	5" 5/8
28		Pogarese	4" 1/4 tg	4" 5/8
29		Tioule/2	4" 1/4	4" 5/8
30		Sind	5" 1/2	6"
31		Mektab	4" 1/4 tg	5"
32		Zignago PG	5" 1/2	6"

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33		Solyer	4" 1/4	4" 5/8
34		Vedapack	4" 1/4	4" 5/8
35		Pestovica	5"	5" 1/8

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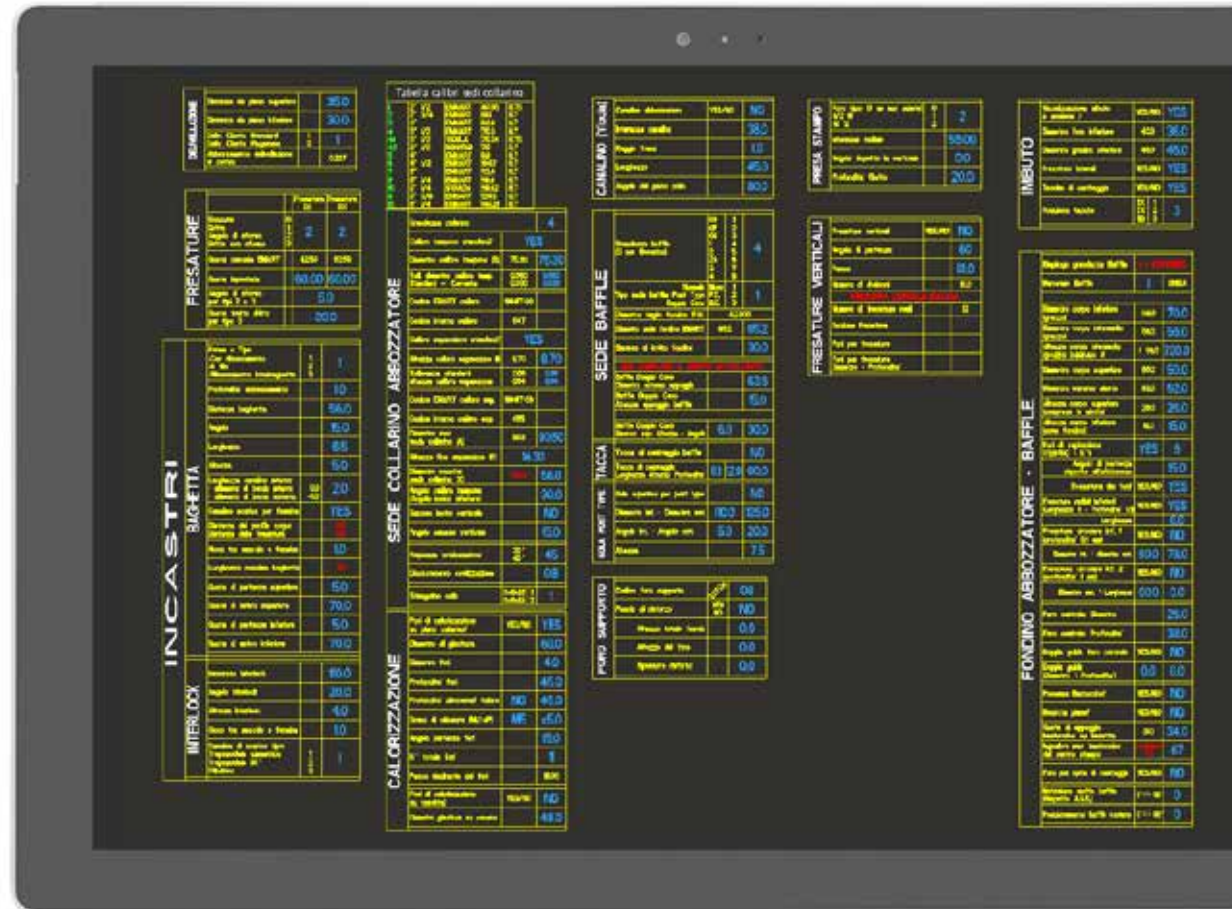
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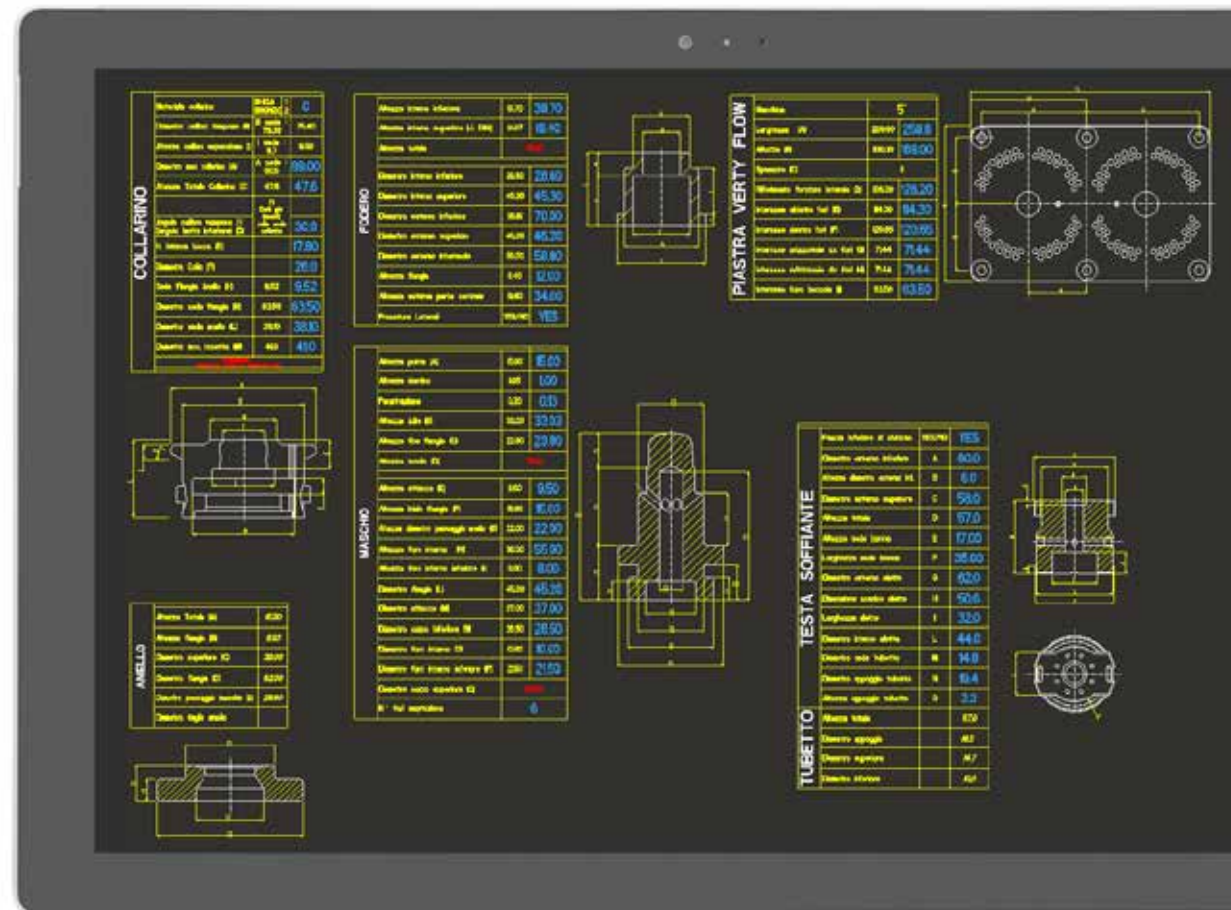
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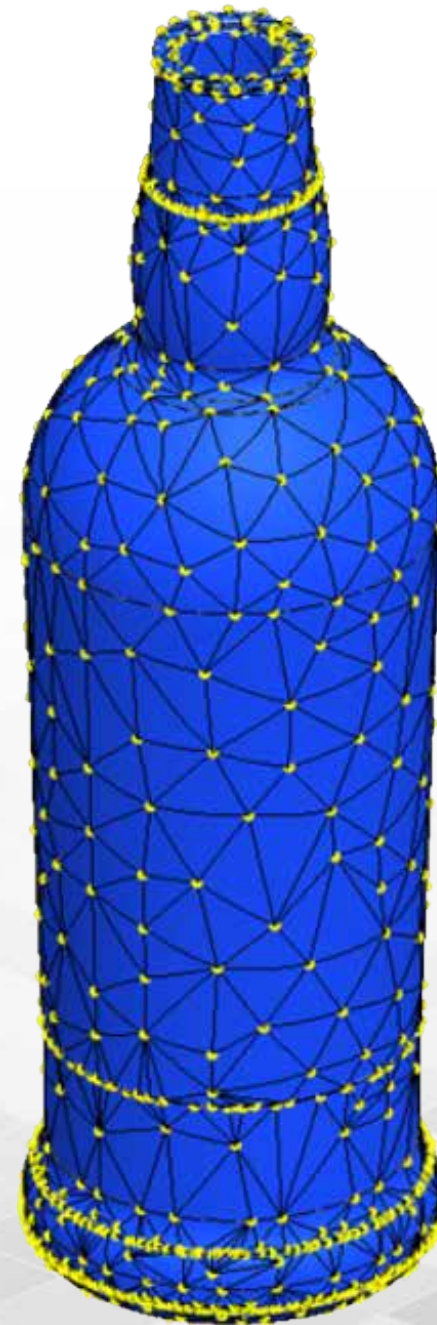


›03 Techniques used

FEM structural analysis of bottles

›Structural simulation using the
Creo Simulation module for Finite Element
analysis both in the pre-project phase
and in the conclusive one.

›Ready-to-use and updatable indications
as to the more onerous situations from
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›04 Conclusions



Reduction in the design turnaround time for a complete mould from one week to a day.



A reduction in design and compilation errors thanks to Layout's logical and functional order and to its perfect associability with the 3D models and the 2D drawings.



Improvement in the quality of the Final 2D document thanks to the high level of detail in each phase of the project design package, from design right up to production.



Total support for the client thanks to the overall strategic view of the project right from the earliest design phases.

Thank you!



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