



GNSZ

TOOL MANUFACTURING



ISO 9001
ISO 14001



Everything, concerning toolmaking

OUR MAIN PROFILE



PROJECT MANAGEMENT



WHAT CAN WE UNDERTAKE?

- Progressive tools
- Cutting/punching tools
- Bending tools
- Drawing tools
- Transfer solutions
- Checking fixtures, gauges, welding fixtures
- Tool repair/servicing
- Tool modifications
- Injection mold tools (1650 x 800 → 9800 kg)

Capacity:

- 100-120 complete tooling annually
- 1700 m2 production hall
- 17 toolmakers in 2 shifts
- 9 CNC milling machines in 3 shifts
- 10 full-time tool designers
- 500 tons press machine for tool test
- 6 tons truck load capacity for delivery

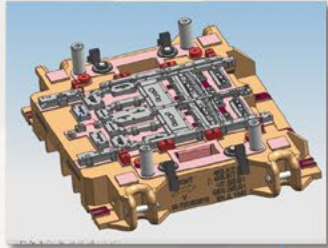
Experience with the following material types:

- DP600
- S700MC
- Aluminium
- Stainless steel

Sizes:

- Tooling up to 3500 x 2000 mm
- Gauges up to 1200 x 500 mm
- Sheet material thickness: 0,5-5 mm

HISTORY



We started tool manufacturing in cooperation with subcontractors.

2000



We receive certification according to MSZ EN ISO9001:2001 by EMI_TUV Bayern.

2005



Our CNC machine park is further strengthened by the acquisition of a new milling center, further increasing our milling capacity. Our NUMEREX CMM is put into operation, allowing our own precise measurements of tool produced drop-out parts.

2008



Our site built in 2011 is expanded (doubled in size), and we relocate some machinery and manpower to premises located 10 km from our main Nemesvamos site. 2013-2015 Acquisition of machine tool, purchase of equipment and expansion of our transport fleet.

2012



GNSZ re-started the activity regarding the injection mold tool.

2016



Building our 2nd production hall in Nemesvamos including technology development (HSC milling machine which is suitable for palletized production).

2019

1996

3 designers founded the enterprise which dealt only with designing tools



2004

We started our own tool manufacturing in a rented hall.

2006

We occupied our own, completely rebuilt depot in Nemesvamos with 435 m² useful groundspace. Thereafter, the company has been operating with two production sites which communicate through a self-developed production controlling software (QUAID).



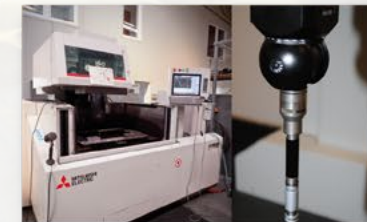
2011

We took possession of our new facilities built in the inner area of Nemesvamos. Our CNC milling capability was further expanded by the acquisition of a HURCO portal milling machine (3000*2000 mm working range).



2013-2015

Acquisition of machine tools, purchase of equipment and expansion of our transport fleet.



2018

Installation of driven lathes machine type MAZAK.



SITES

8248 Nemesvámos, Hungary



SITE 1:

CNC milling machines and traditional preparation machines



SITE 2 (HEADQUARTERS OFFICE):

Design, Projectmanagement, Purchasing, Logistic, Financing, Grinding machines, Tool assembly, CMM machine, Pressmachine



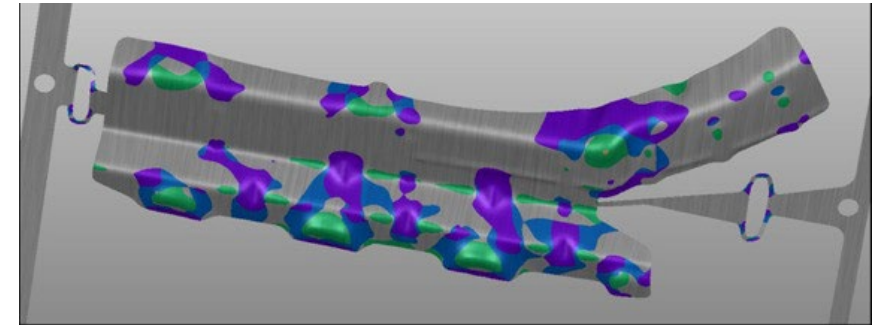
SITE 3:

CNC machines, Laser cutting machine, Wire cutting machines,

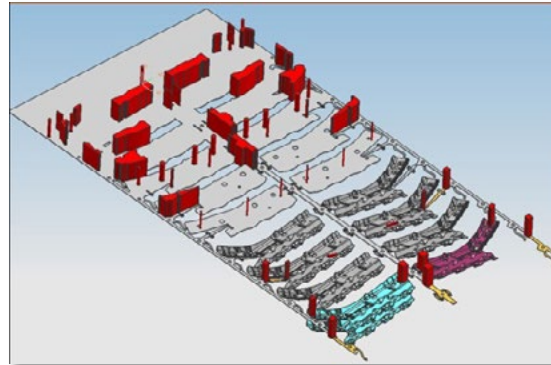
TOOL DESIGN

AUTOFORM software for simulation

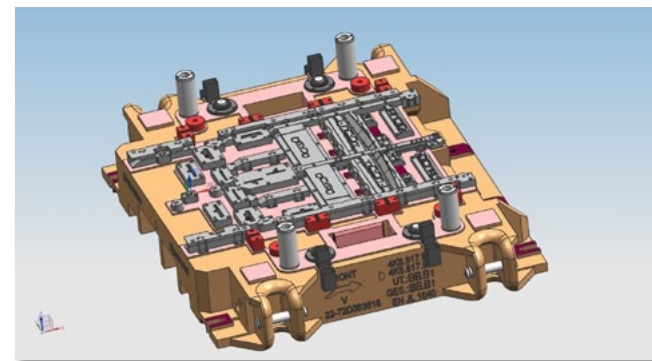
- 10 qualified, flexible, productive and precise tool designers



- Strip layout



- Unigraphics NX 12 for 3D design



CNC MACHINES

- 17 qualified employees in 3 shifts and 8 trainee in 1 shift



DMU 65
650*650*560 (mm)



DMC 635
635*510*460 (mm)



DMU 80
980*630*630 (mm)

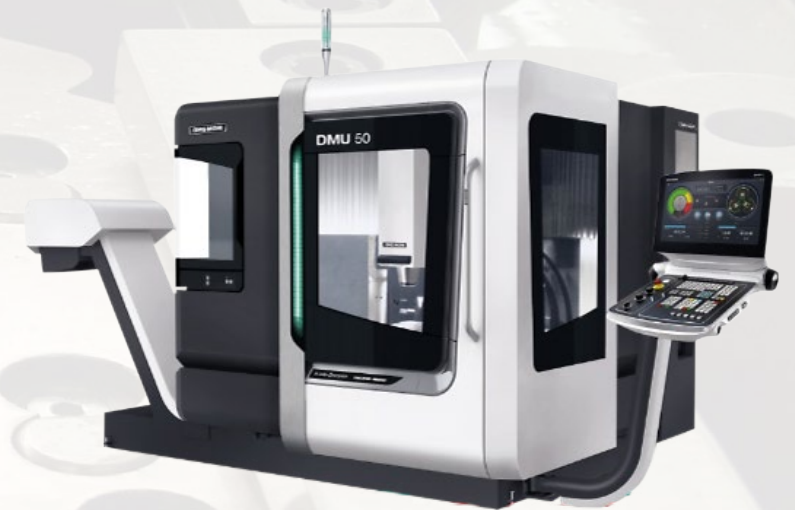
CNC MACHINES



DMC 1035
1035*560*510 (mm)



DMC 60
750*570*570 (mm)



DMU 50 (simultan 5 Axis)
500*450*400 (mm)

CNC MACHINES

- Max. X travels: 750 mm
- Max. Y travels: 650 mm
- Max. Z travels: 560 mm
- Max. table load: 600 kg
- Table diameter: 650 mm

DMU 75 monoBLOCK
750*650*560 (mm)



HURCO DCX 32-SK50
3200*2100*920 (mm)

- Max. X travels: 3200 mm
- Max. Y travels: 2100 mm
- Max. Z travels: 920 mm
- Max. table load: 11000 kg
- Table length: 3000 mm
- Table width: 1700 mm



CNC MACHINES

- 2 qualified employees in 2 shifts
- Max. X travels: 2600 mm
- Max. Y travels: 1100 mm
- Max. Z travels: 900 mm
- Max. table load: 4000 kg
- Table length: 3200 mm
- Table width: 1100 mm

Mikron Mill S 600U HSC

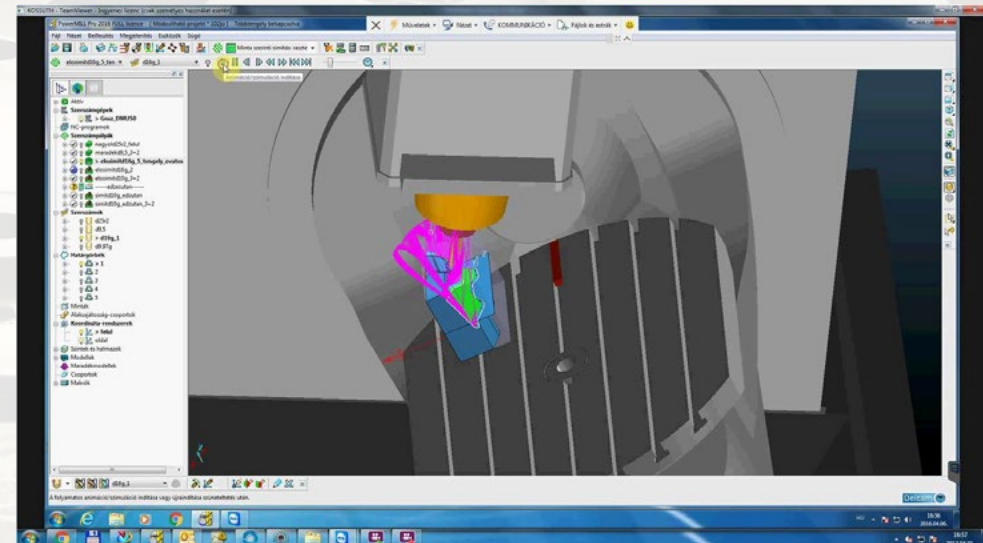
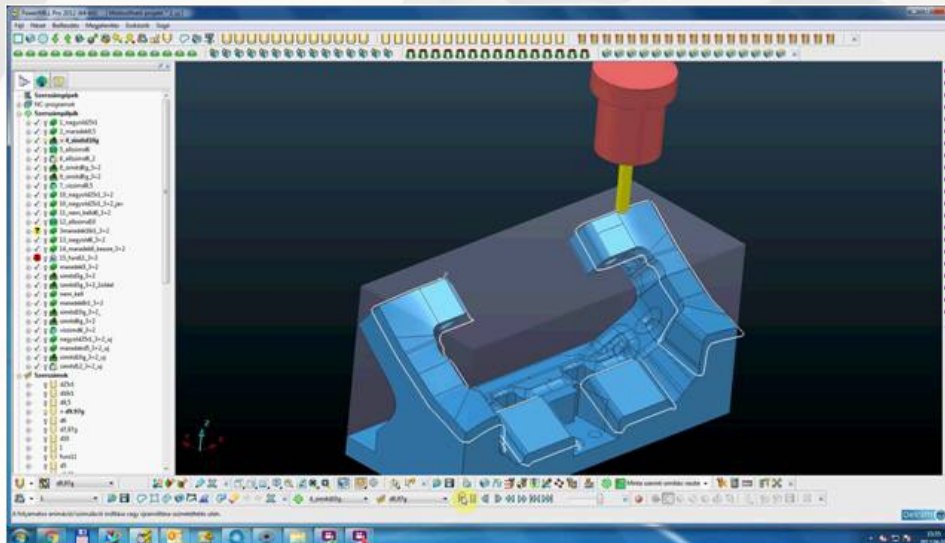


DMF 260 (simultan 5 Axis)
2600*1100*900 (mm)



CNC PROGRAMMING

- Programming according to color coded 3D models → no 2D drawings
- The programmes required for machining are made with the Autodesk Powermill 3D CAD/CAM software which allows to simulate tool paths as well.



WIRE CUTTING MACHINES

- Based on 3D plans → Goal is not to use 2D drawing
- 5 qualified employees in 3 shifts

4 pcs. Mitsubishi wire cutting machine

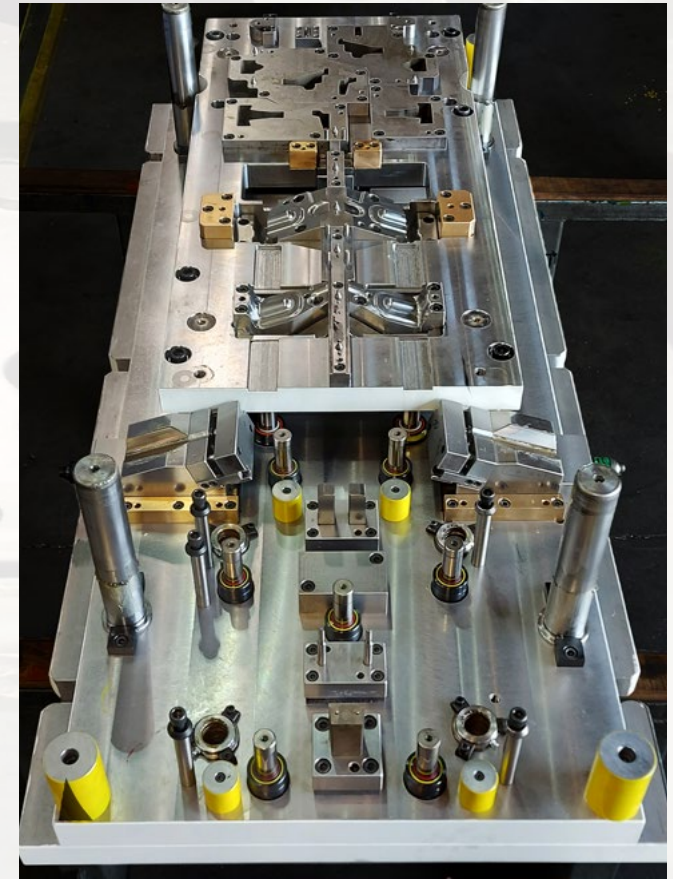
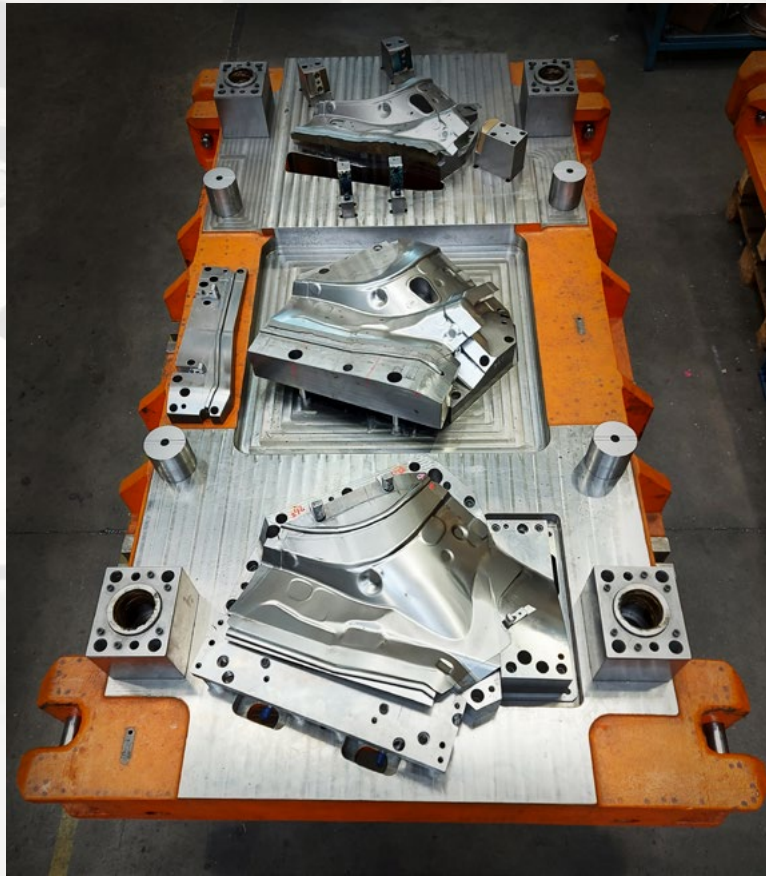
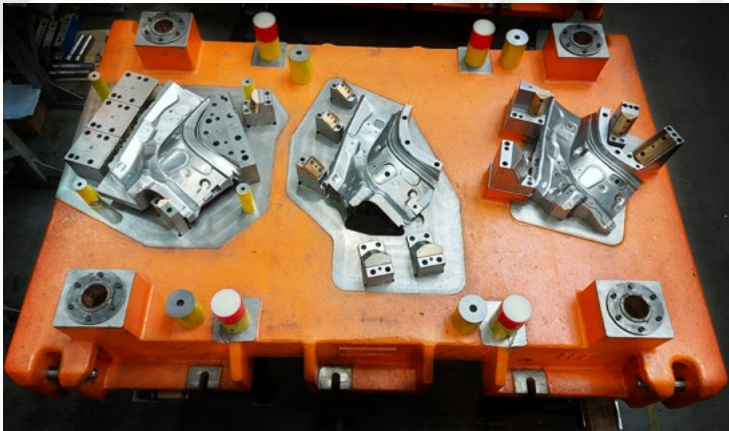
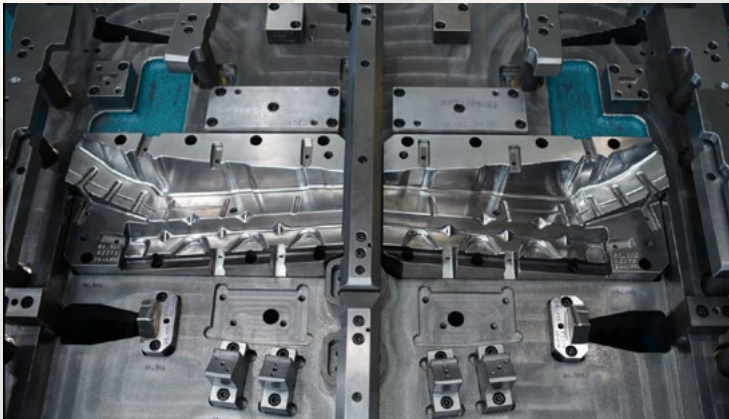


1 pc. Sodick wire cutting machine



TOOL ASSEMBLY

- Tool assembly with 17 qualified employees in 2 shifts and 8 trainee in 1 shift



TOOL TEST

EXCENTER PRESS WITH 500 T PRESS FORCE FOR TOOL TEST

- **Maximum tool sizes:** 3050x1680x1070 mm
- **Table length:** 3050 mm
- **Table width:** 1680 mm
- **Coil up to** 940 mm



QUALITY CONTROL

- 800 x 1500 x 700 (mm) measuring range
- measurement of the critical tool elements before assembly
- drawing/desing review
- programming
- fixtures measurement
- measurements for reverse engineering
- 3 qualified employees in 2 shifts

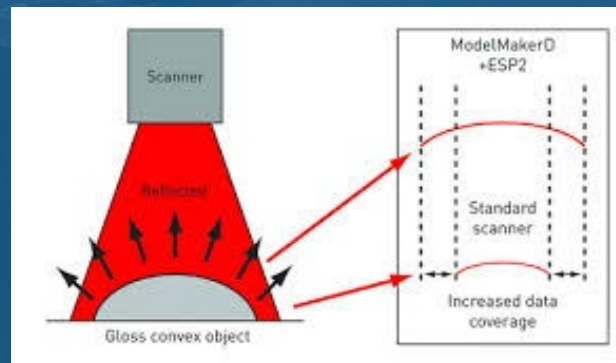
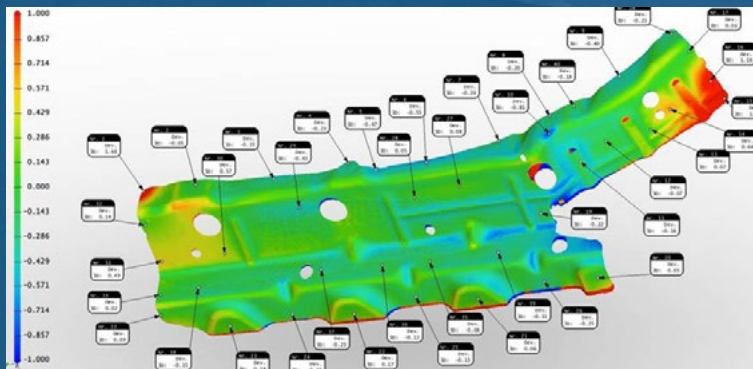
WENZEL XORBIT
1000*2000 3D CMM

WENZEL LH 65
750*1200 3D CMM

MEASUREMENT REPORT WITH LASERSCANNER FOR 3D MEASURING

Type:	Nikon MMDx 100
Bandwidth (y) (mm):	100mm
Workdistance (near FOV):	100mm
Measuring range (z):	100mm
Accuracy:	10 μ m
Data transfer:	50 Hz-150 Hz
Points per band:	1000

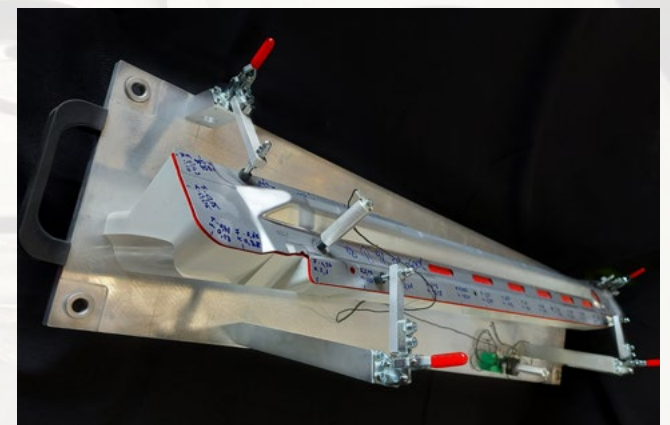
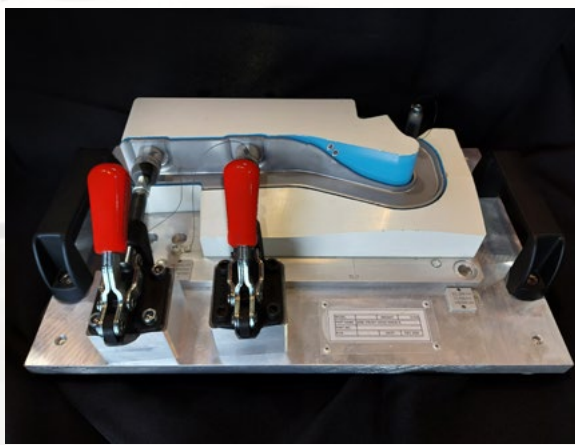
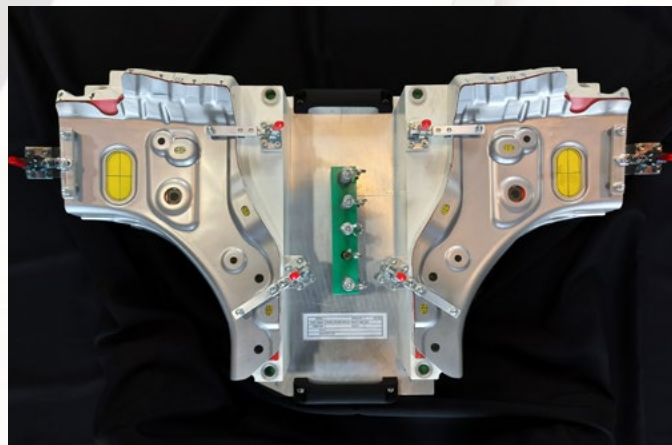
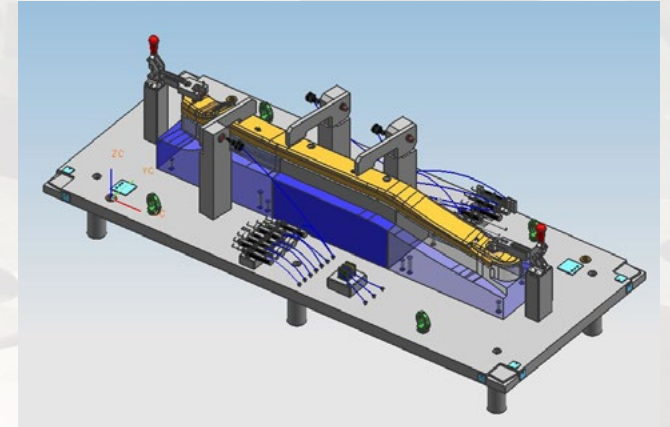
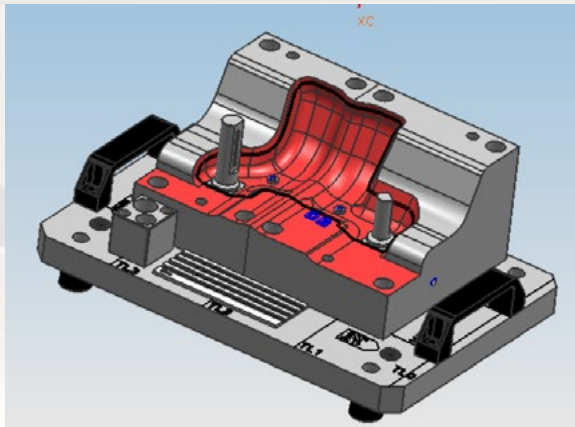
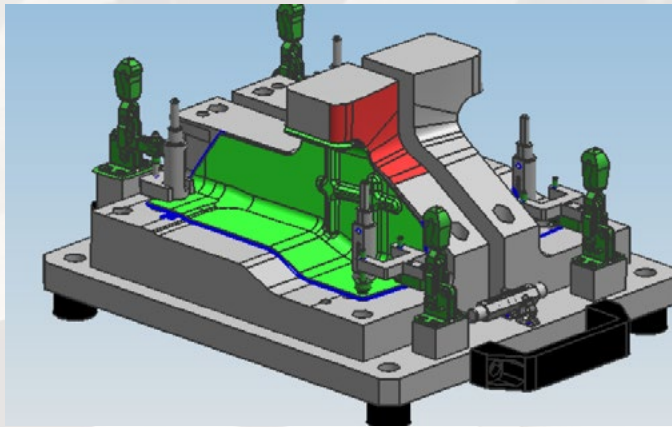
Temp. compensation:	yes
Laser output power:	Class 2
Output power control:	Automatic each point
Measurement range:	2,5 m
Point repeatability:	0,027 mm
Volume accuracy:	+/-0,038 mm



NIKON MCA*20+3D



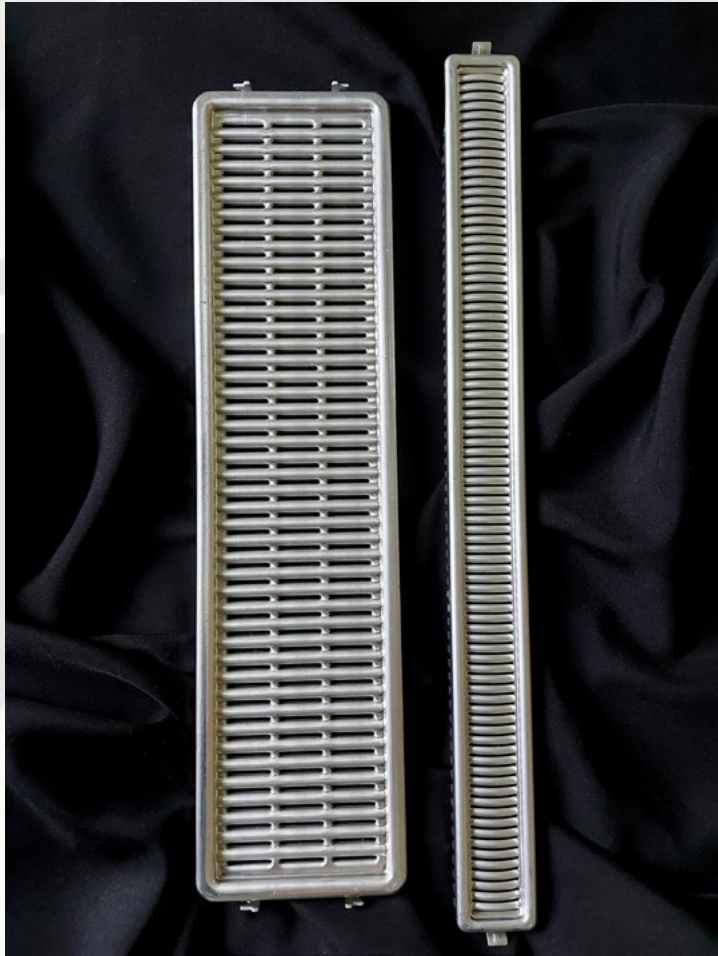
CHECKING FIXTURES



REFERENCES



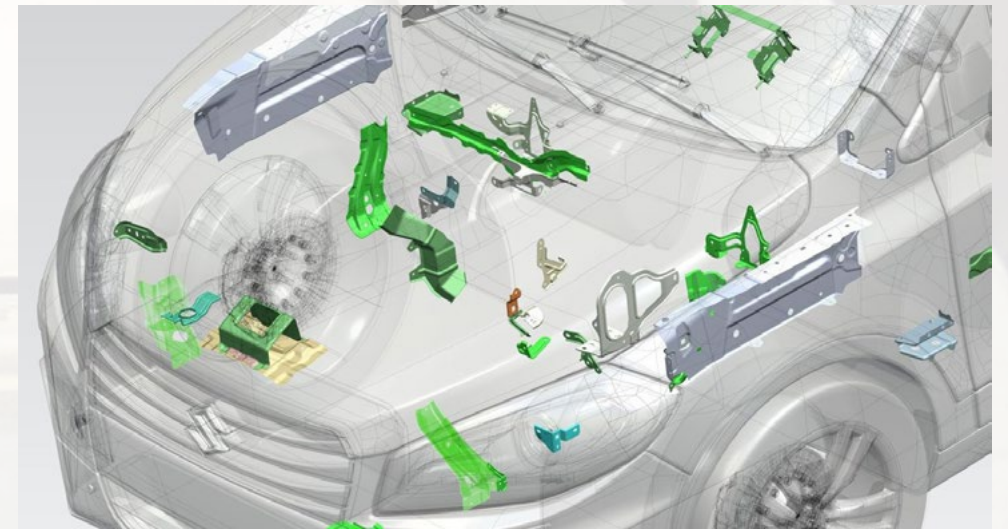
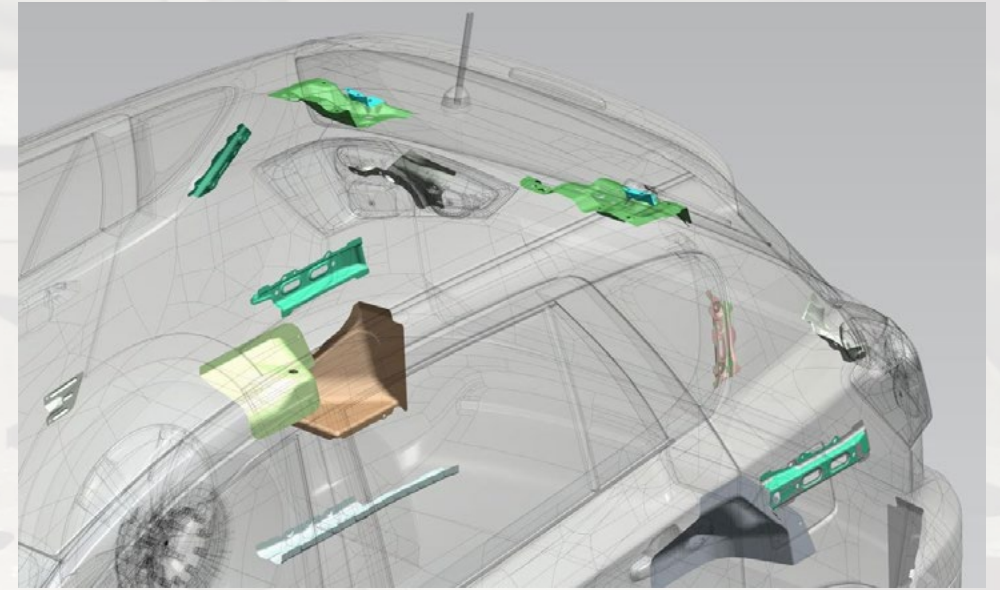
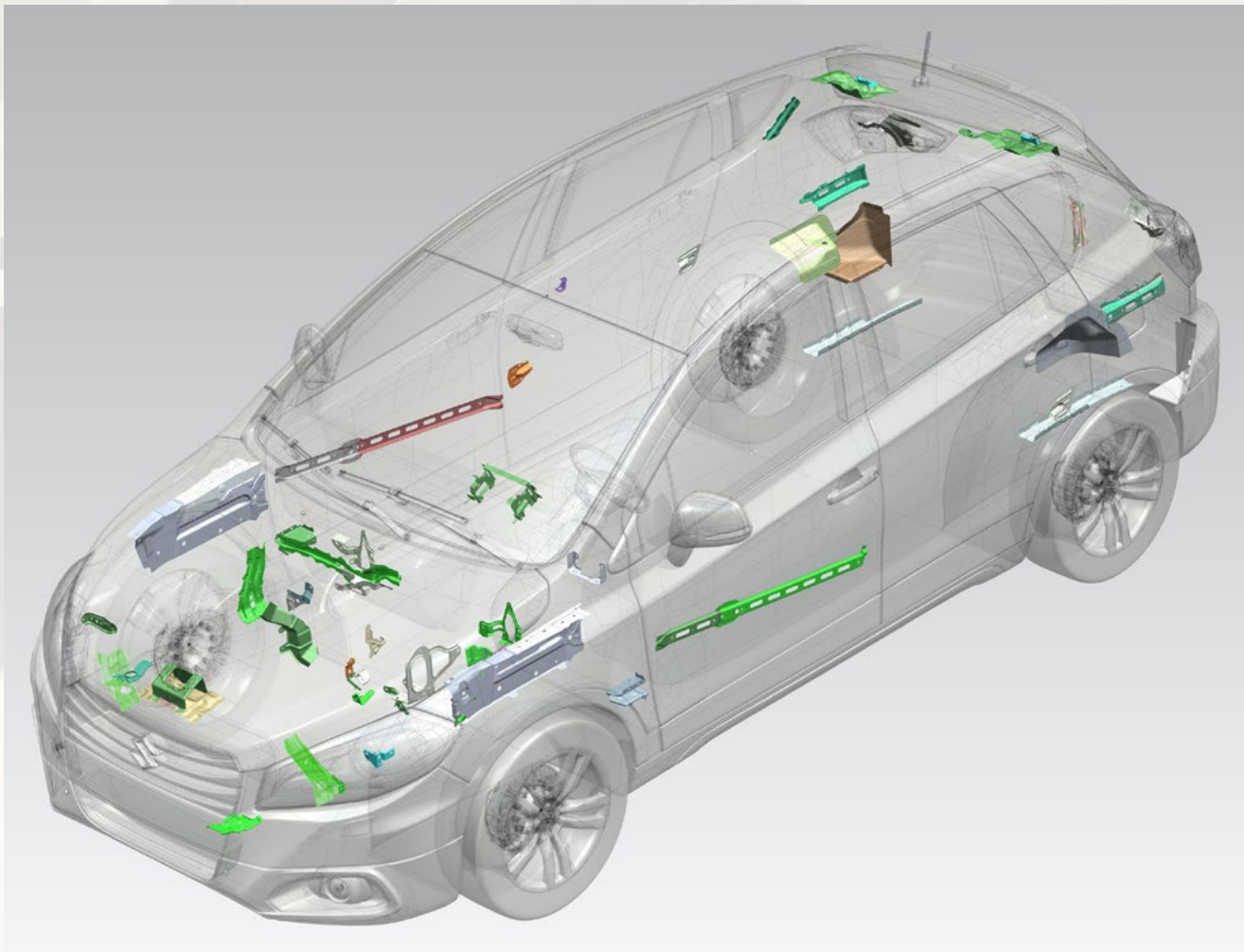
REFERENCES



REFERENCES



REFERENCES



OUR MAIN COSTUMERS

