



Welcome to the World of Design



@TKARETR



@TKAREBURSA



Tkare_engineering



Tkare Mühendislik

We are your engineering partner



Tkare Mühendislik



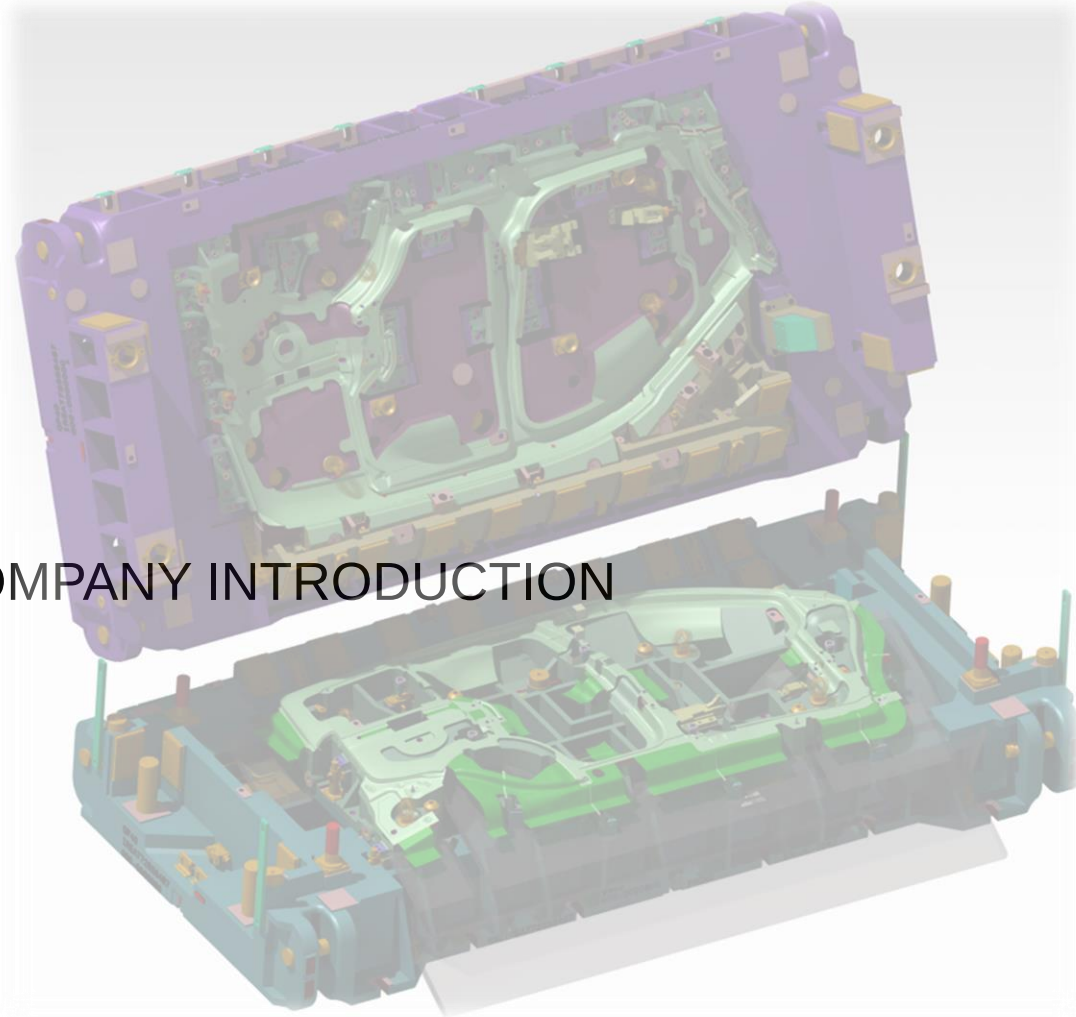
T.C. SANAYİ VE
TEKNOLOJİ BAKANLIĞI



TKARE ENGINEERING



Welcome to the World of Design



PRESENTATION OF COMPANY INTRODUCTION

■ TKARE ENGINEERING

TKARE ENGINEERING
10.29.2020

TKARE ENGINEERING



Welcome to the World of Design

It is important
to see the future
when making decisions.



COMPANY PROFILE



Welcome to the World of Design



•ABOUT US

The company has been established in 2011 to provide service about sheet metal dies for Automotive, White Goods, Aviation and Defense Industries with it's team that provide service in Automotive Side Industry, Sheet Metal Die Design, Die Production and Project Management for long years. Our goal as TKare Engineering is to provide fast, high-class, innovative and result-oriented solutions for our customers

OUR MISSION

In order to meet the requests and needs of our customers in Sheet Metal Die industry; by using our knowledge and expertise, following up all developing technologies, bring them to bear and put at the disposal of our customers by setting up necessary organization.

To deliver the product on time cost effectively and with high-quality.

OUR VISION

To be a pioneer organization in Sheet Metal Die industry in every step from product design to die production by providing fast, high-quality result-oriented solutions, following up all technologies and producing the truest solutions for the customers.

COMPANY PROFILE



Welcome to the World of Design

Tkare Engineering; 11/12/2018 With the date of the Republic of Turkey by the Ministry of Industry and Technology «Design Center» was confirmed.



Welcome to the World of Design



CERTIFICATE



This is to certify that

TKARE MAK. İNŞ. MÜH. MİM. SAN. TİC. LTD. ŞTİ.
Işık Tepe Mahallesi, Kahverengi Caddesi No:9
Işık Tepe Organize Sanayi Bölgesi
16140 Nilüfer / Bursa
Turkey

has implemented and maintains a Quality Management System.

Scope:
Sheet Metal Die Design, Mold Design, Product Design, Mechanical Design and Engineering Services

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

TS EN ISO 9001 : 2015

Certificate registration no. 31300202 QM15
Valid from 2019-02-08
Valid until 2022-02-07
Date of certification 2019-01-19



DQS Denetim ve Belgelendirme Ltd. Şti.



A. Erdem Çörömez
Managing Director

Accredited Body: DQS Denetim ve Belgelendirme Ltd. Şti., 19 Mayıs Mah. Sınan Ercan Cad.,
Paşa Konusu Çiftliği No: 19/B1 Blok, 34736 Kağıthane - İstanbul - Turkey



TÜRKAK RDÜS NO:
YS-01593-3.3303

Welcome to the World of Design



THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and
DQS GmbH Deutsche Gesellschaft zur Zertifizierung von Managementsystemen
hereby certify that the company

T KARE MAK. İNŞ. MÜH. MİM. SAN. VE TİC. LTD. ŞTİ.

İşiktepe Organize Sanayi Bölgesi Kahverengi Cad. No.: 10
Nilüfer - Bursa / TURKEY

has implemented and maintains a **Information Security Management System.**

Scope:
Sheet Metal Die Design, Mold Design, Product Design, Mechanical Design and Engineering Services

Through an audit, documented in a report, it was verified that the management system
fulfills the requirements of the following standard:

TS ISO/IEC 27001 : 2013

Valid from 2017-12-22
Valid until 2020-12-21
Date of certification 2017-12-22

Registration number: DE-31300202 ISMS13




Alex Stoichitoliu
President of IQNet


Stefan Heinoth
Managing Director of DQS GmbH



IQNet Partners:**
AENOR Spain AFNOR Certification France APCER Portugal CCC Cyprus CISC Italy
CQC China CQM China CQS Czech Republic Cro Cert Croatia DQS Holding GmbH Germany FCAV Brazil
FONDONORMA Venezuela ICONTEC Colombia Inspecta Certification Finland INTECO Costa Rica
IRAM Argentina JQA Japan KFK Korea MIRTEC Greece MSZT Hungary Nemko AS Norway NSAI Ireland PCBC Poland
Quality Austria Austria RR Russia SIGE Mexico SII Israel SIQ Slovenia SIRIM QAS International Malaysia
SQS Switzerland SRAC Romania TEST St Petersburg Russia TSE Turkey Vingroup Belgium YUQS Serbia
IQNet is represented in the USA by: AFNOR Certification, CISC, DQS Holding GmbH and NSAI Inc.

* This attestation is directly linked to the IQNet Partner's original certificate and shall not be used as a stand-alone document.
** The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com



CERTIFICATE

This is to certify that

T KARE MAK. İNŞ. MÜH. MİM. SAN. VE TİC. LTD. ŞTİ.
İşiktepe Organize Sanayi Bölgesi Kahverengi Cad. No.: 10
Nilüfer - Bursa / TURKEY

has implemented and maintains an
Information Security Management System.

Scope:
Sheet Metal Die Design, Mold Design, Product Design, Mechanical Design and Engineering Services

Statement of applicability: 31.03.2015 - Rev.2

Through an audit, documented in a report, it was verified that the management system
fulfills the requirements of the following standard:

TS ISO/IEC 27001 : 2013

Certificate registration no. 31300202 ISMS13
Valid from 2017-12-22
Valid until 2020-12-21
Date of certification 2017-12-22



DQS GmbH


Stefan Heinoth
Managing Director

Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany
Administrative Office: DQS Dienstleistungen GmbH, 91, 19 Mayıs Mah. Sinan Ercan Cad.,
Paşa Korusu Sitesi No: 18/B1 Blok, 34736 Kadıköy - İstanbul / Turkey

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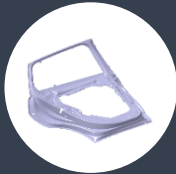
"In your projects, reliable, professional for a helping hand; TKARE Engineering"

Welcome to the World of Design

01

Sheet Metal Tool & Die Engineering

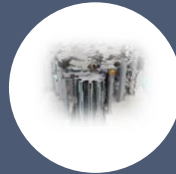
- Product Design
- Feasibility & Simulations
- 3D Process / Method
- Die Design
- Tool & Die Kinematic Analysis



02

Machine / Mechanical Design

- Special Machine Designs
- Mass Production Machine Designs
- Apparatus & Fixture Designs



03

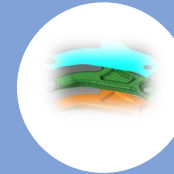
Software

- Pam Stamp
(Sheet Metal forming simulations)
- Expressus
(Sheet Metal tool & die kinematic analysis and transfer system analysis)



04

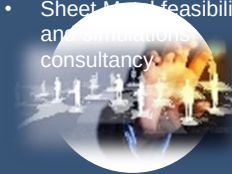
Reverse Engineering



05

Training & Consultancy

- Engineering Consultancy
- Project Management Consultancy
- Sheet Metal Product Design Consultancy
- Sheet Metal tool & die design Consultancy
- Sheet Metal feasibility and simulation consultancy

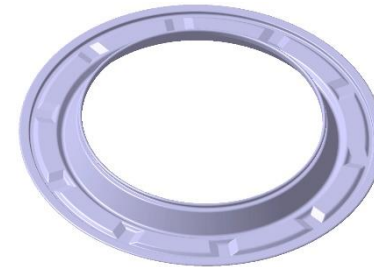
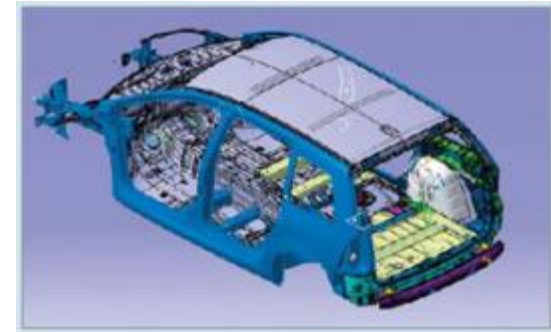


Welcome to the World of Design

•Product Design

Design of functional, producible products with our experience in Sheet Metal sector.

01



•Feasibility & Simulations

All work carried out are reported to our customers. After the simulations; the products in a desired level can be created in the very first part pressing by creating springback compensation surfaces if necessary.

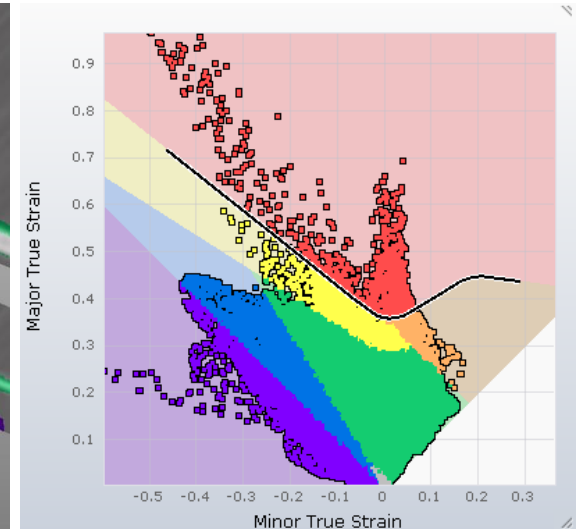
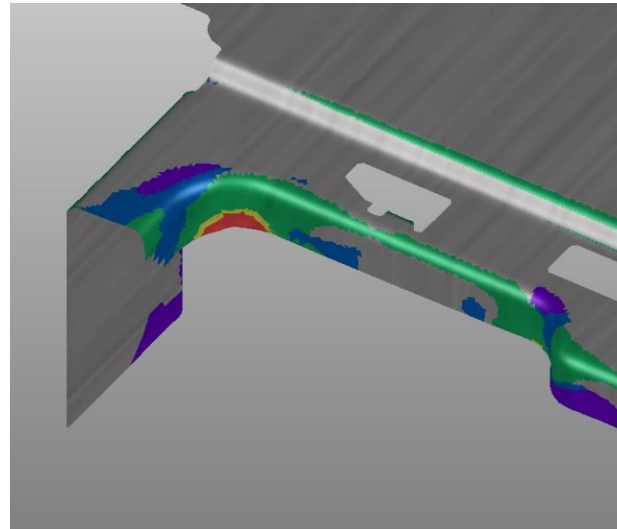
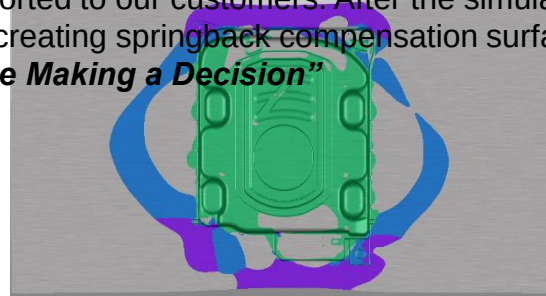
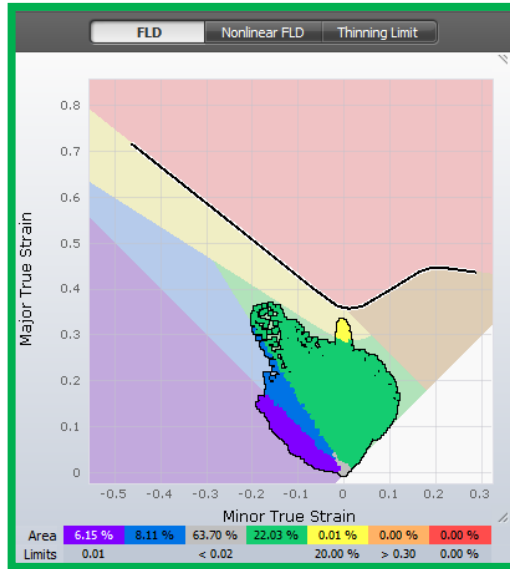
The figure displays four simulation results of a rear door inner panel. The top-left panel shows a green stress map. The top-right panel shows a blue/purple stress map. The bottom-left panel shows a yellow/orange stress map. The bottom-right panel shows a detailed view of a weld area with high stress concentration.

•Feasibility (White Goods)

It's a very important step that the manufacturability of the product is analyzed, decreasing production time and labor in die design and production to an optimum level before starting die design. By doing virtual environment simulations, engineering softwares are used that directs fast die production with minimum costs in this process.

All work carried out are reported to our customers. After the simulations; the products in a desired level can be created in the very first part pressing by creating springback compensation surfaces if necessary.

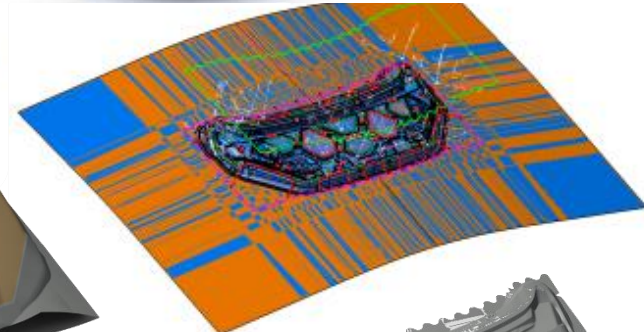
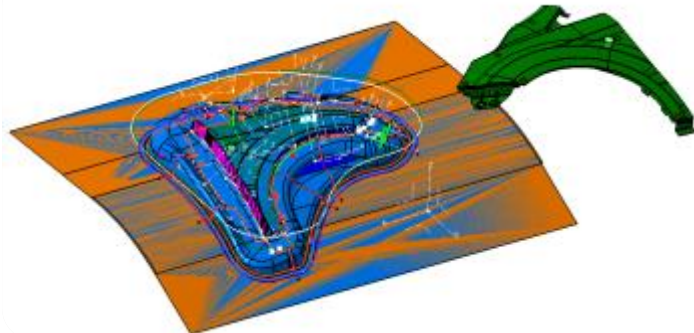
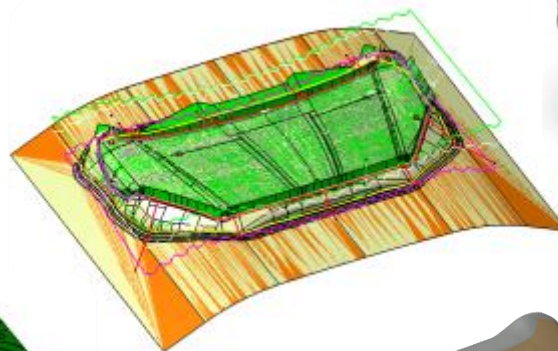
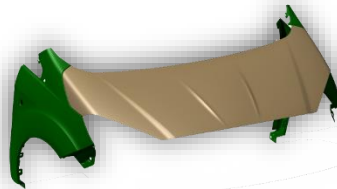
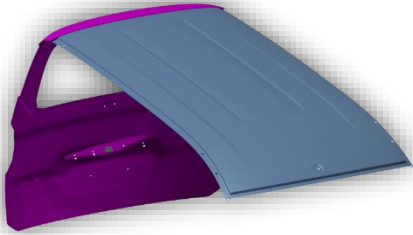
"It's Important To See the Future While Making a Decision"



Welcome to the World of Design

•Process Design

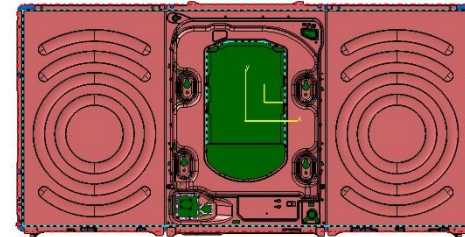
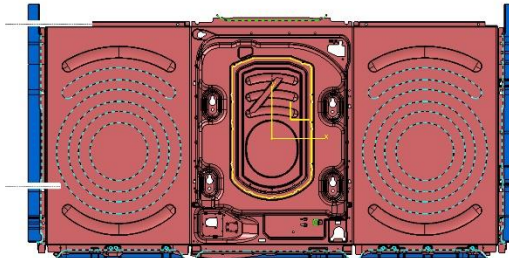
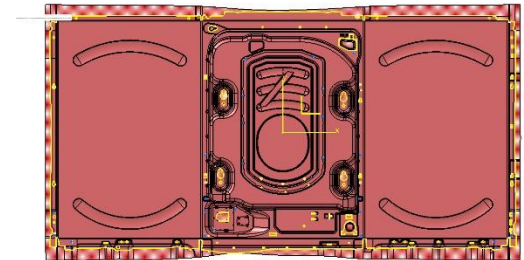
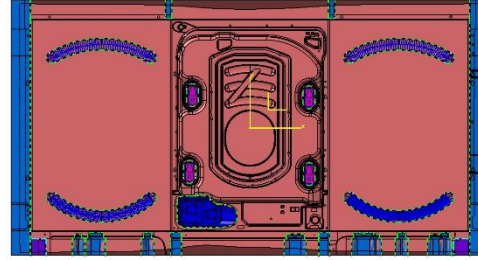
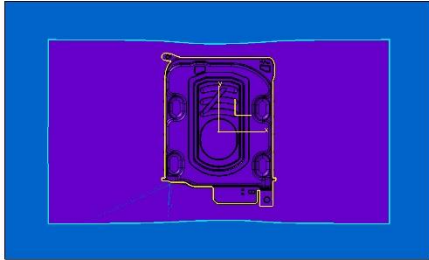
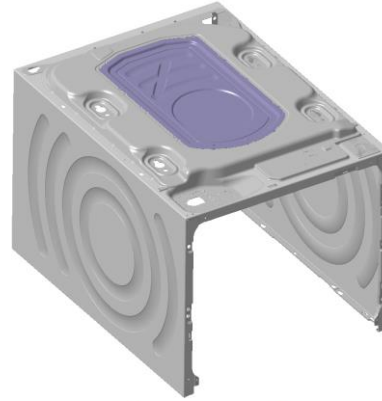
"Correct Process, Correct Die Design."



Welcome to the World of Design

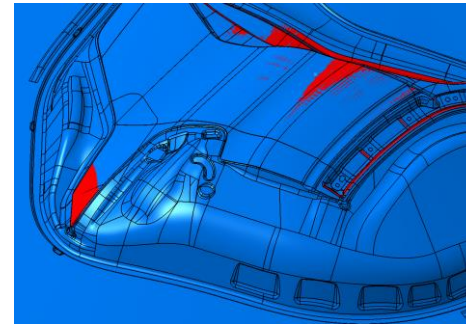
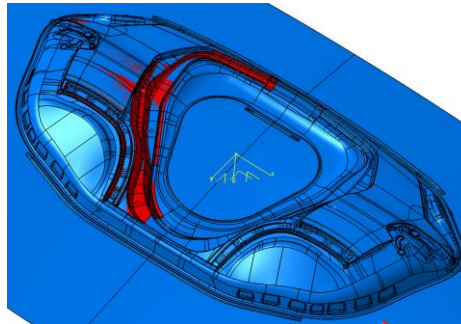
•Process Design (White Goods)

“Correct Process, Correct Die Design.”



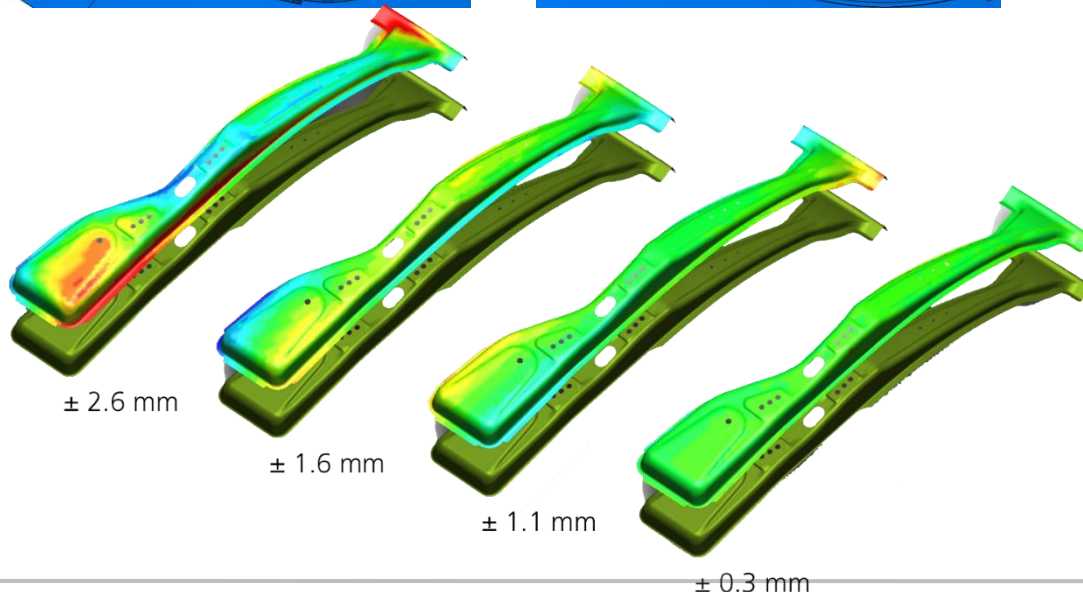
•Springback

After the simulations; the products in a desired level can be created in the very first part pressing by creating springback compensation surfaces if necessary.



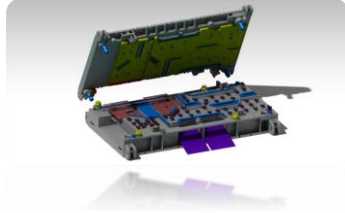
Original

Compansated



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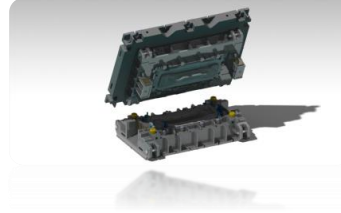
•DIE DESIGN



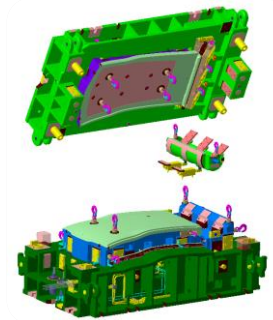
•Blanking Dies



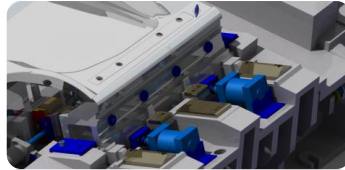
•Draw Dies
•Single Action Draw Dies
•Double Action Draw Dies



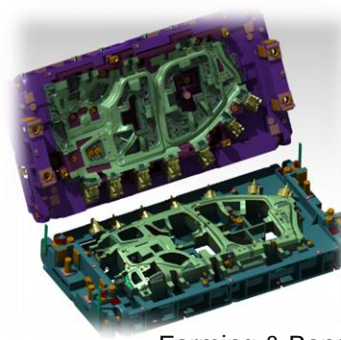
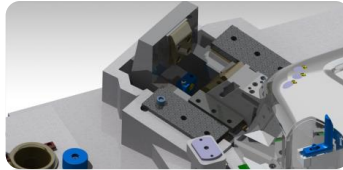
•Trim Dies



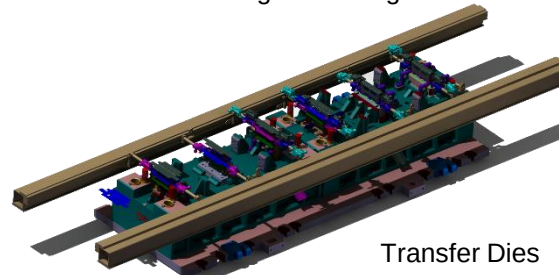
•Rotary Cam Units Dies



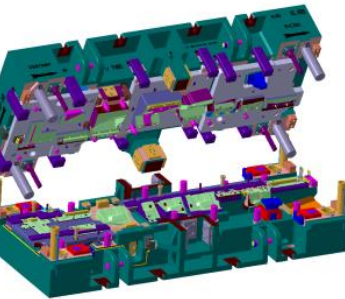
•Cam and Contra Cam Units Dies



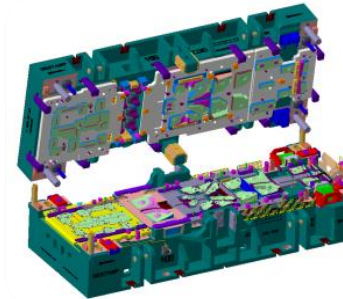
•Forming & Bending Dies



Transfer Dies



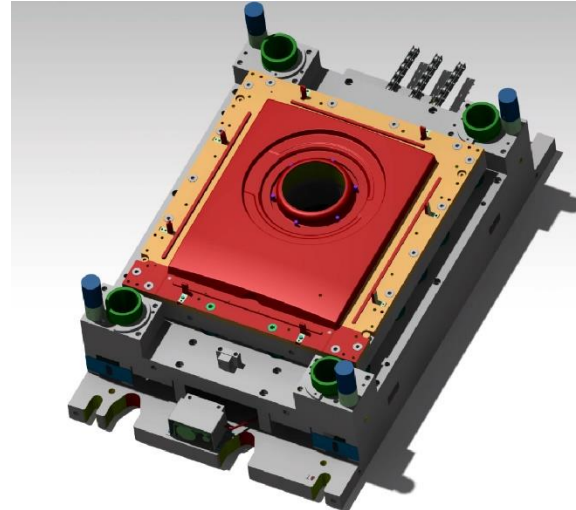
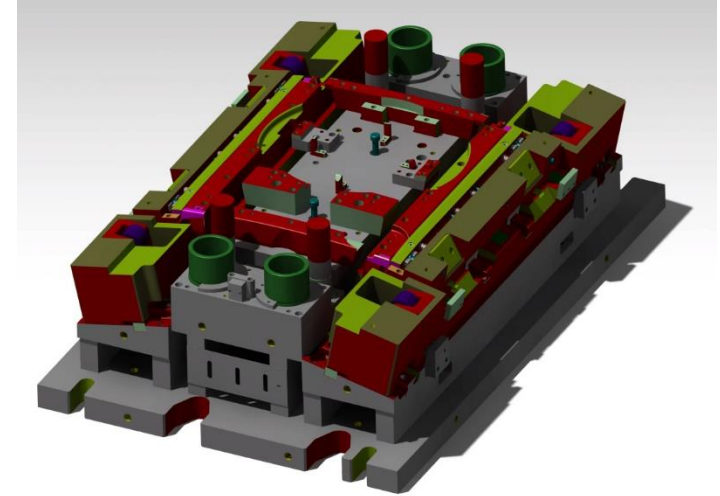
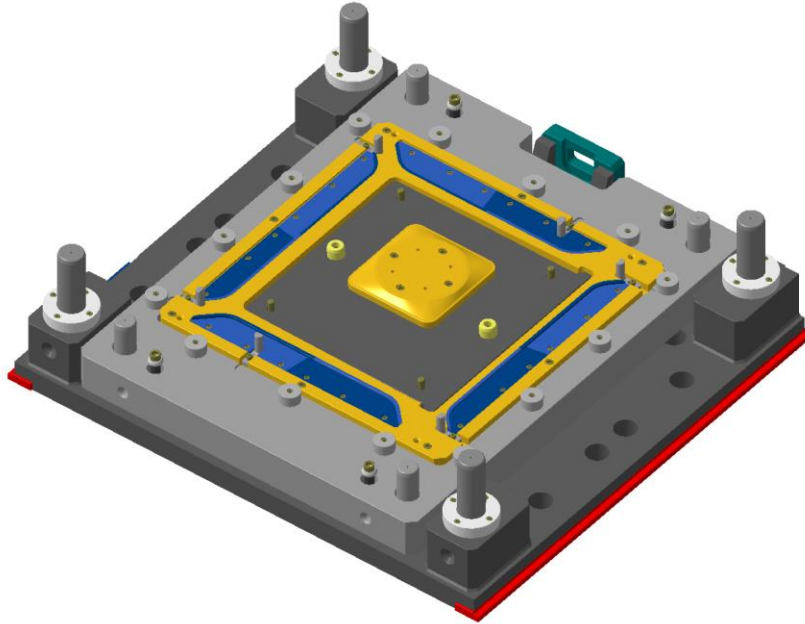
•Progressive Dies



Welcome to the World of Design

•DIE DESIGN

•White Goods



Welcome to the World of Design

•DIE DESIGN

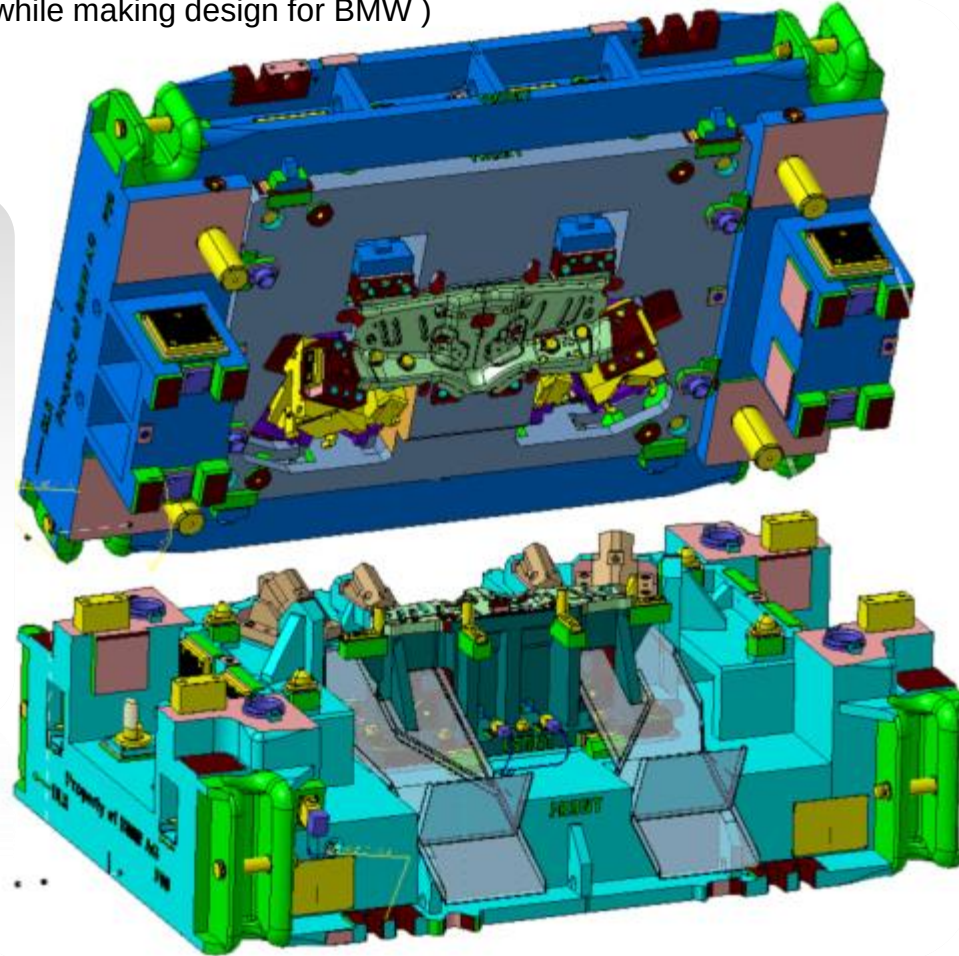
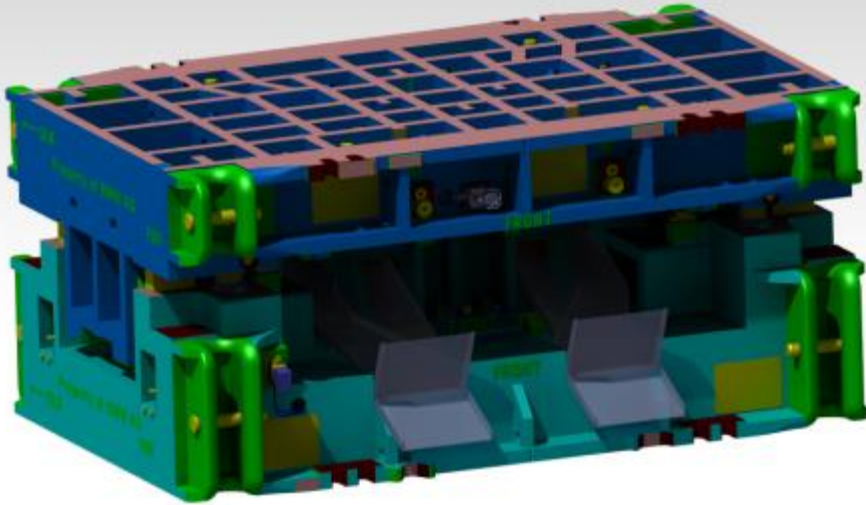
•Fineblanking Dies



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•DIE DESIGN

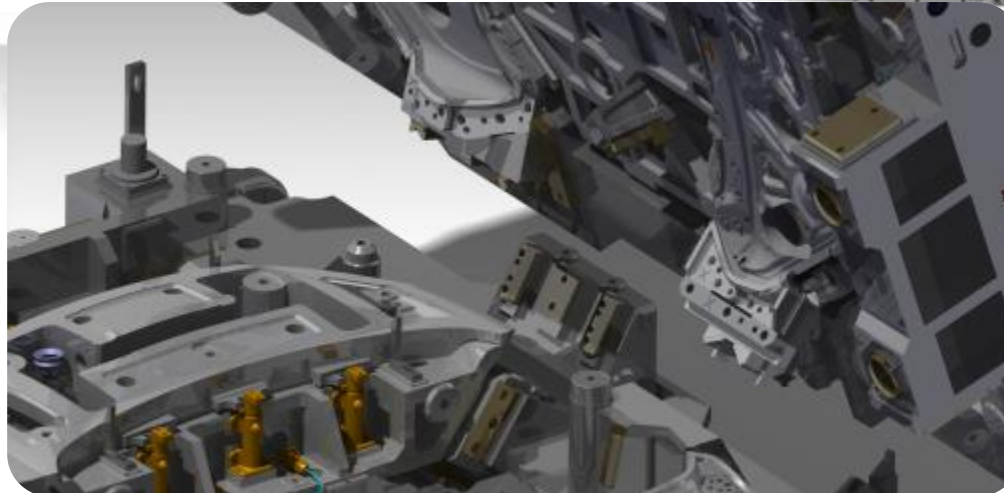
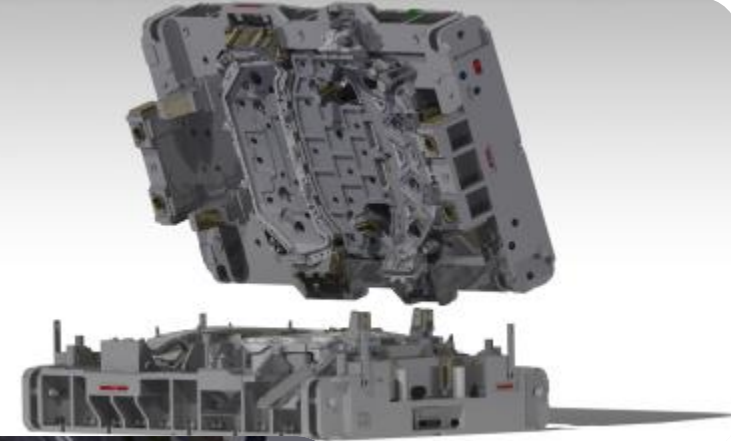
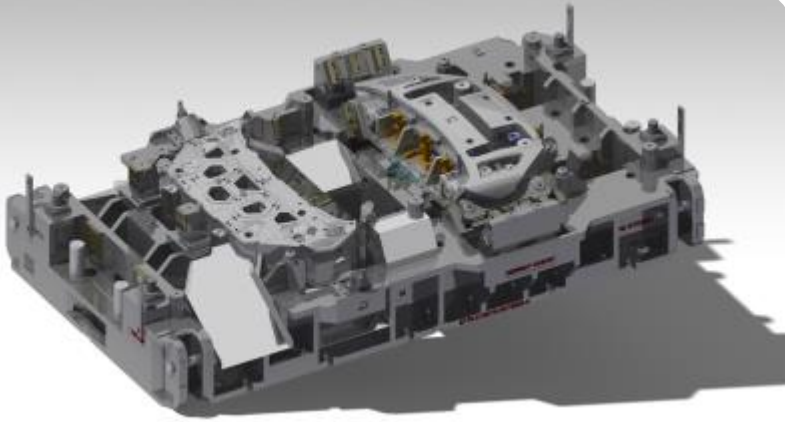
- BMW Dies (We use the program of “Carisma” while making design for BMW)



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•DIE DESIGN

- FORD Dies (We use the program of “PowerTools” while making design for FORD)





Welcome to the World of Design

“Good Design, Trouble-Free Manufacturing”

•Kinematic simulations of die designs

During design phase; the under press kinematic simulation of dies has being done, we can analyze if there is any interference or faulty operating status. If it's asked press synchronization with the die can be installed and you can simulate transfer and cross bar applications. This means that during the design, you can be sure your die is working properly and you can start manufacturing process.

You can stop the simulation in a desired point of kinematic simulation, you can section from anywhere you would like and you can make measurements, initiations between die instruments or you can analyze the connection between die instruments.

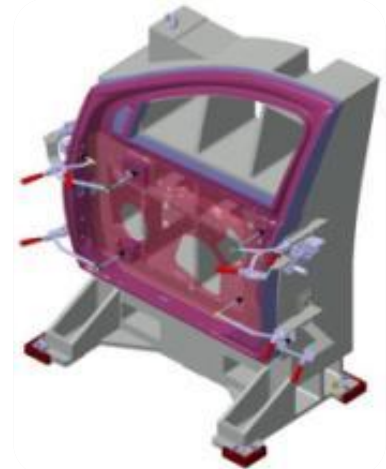
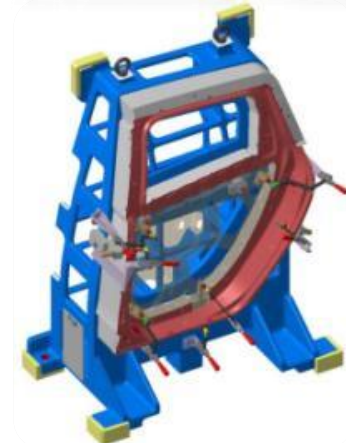
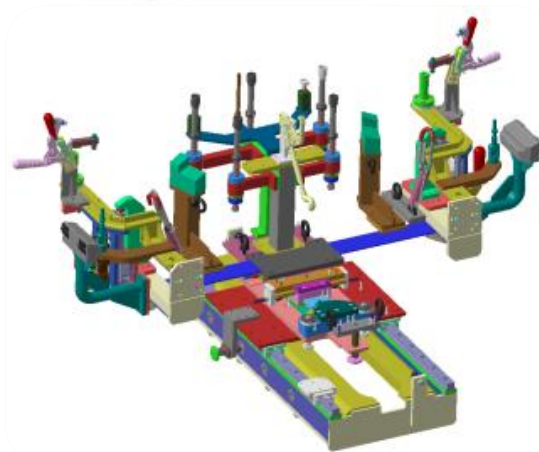
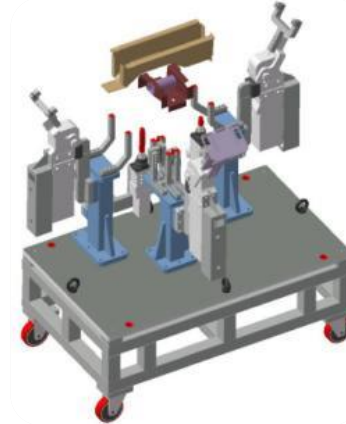
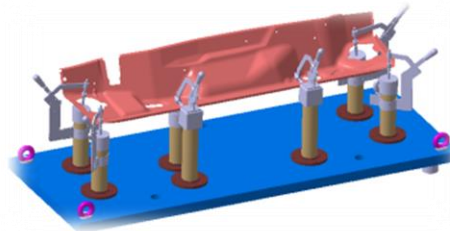
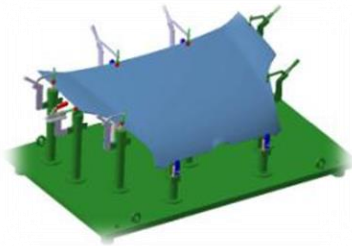
During the simulation of transfer dies, you can determine the reflections of press speed to your die and you can confirm part production in optimum speed even during design phase.



Welcome to the World of Design

•Gauge and Fixtures Design

- Welding Gauges
- Mounting Gauges
- Testing Gauges
- Control Fixtures

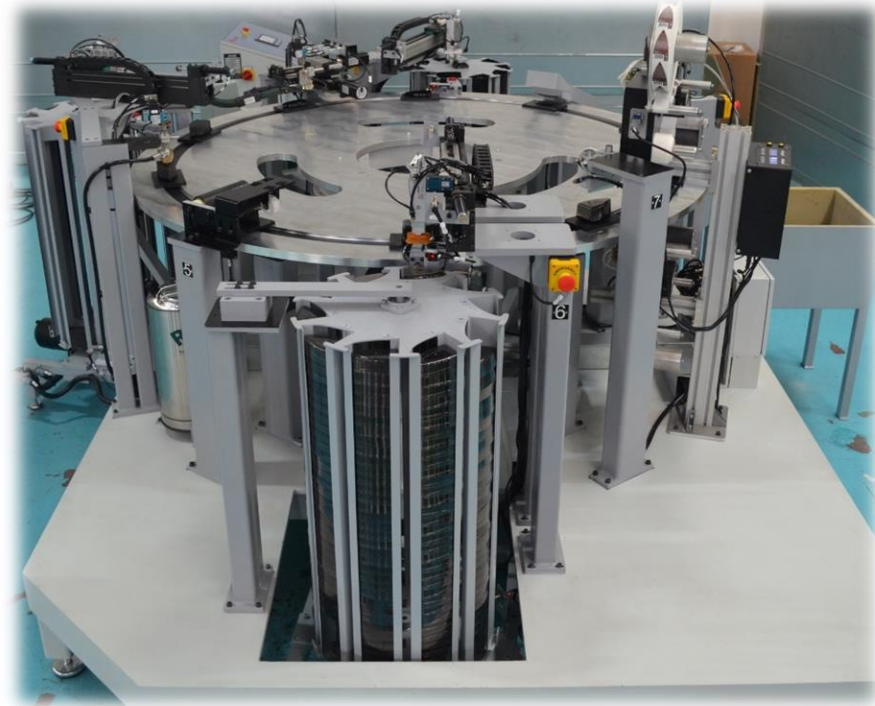


Welcome to the World of Design

•Machine Design and Production

02

TKare Engineering; is providing service in “Machine Design and “Machine Manufacturing” special for your company. The company designs and manufactures turnkey machines from design to manufacture in special machinery.



•Software



03

Expressus (Die Kinematics)

Turkey Distributor

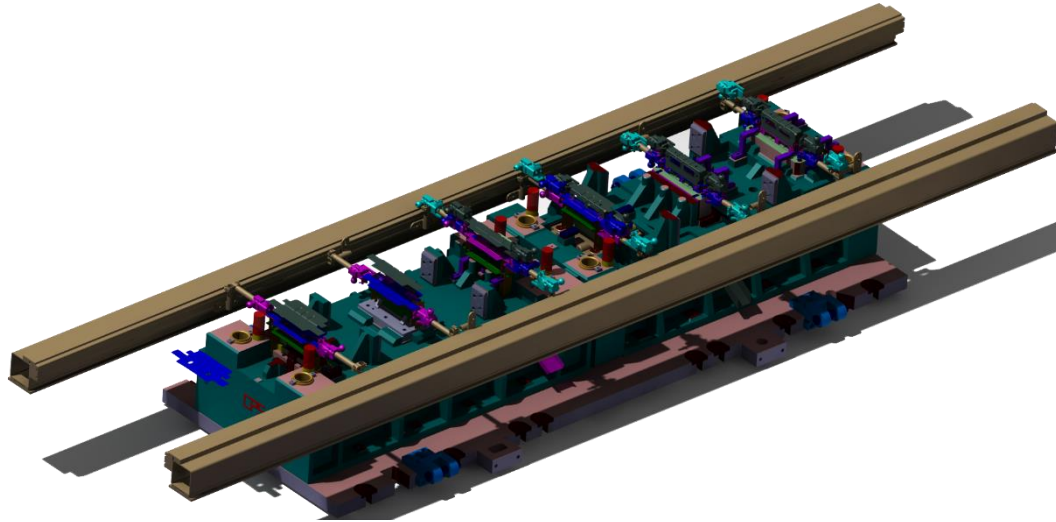
Tkare Engineering has become the only dealer of Japanese Die Kinematics program "EXPRESSUS" software since April 2014.

Thanks to Expressus;

During design phase; the under press kinematic simulation of dies has being done, we can analyze if there is any interference or faulty operating status. If it's asked press synchronization with the die can be installed and you can simulate transfer and cross bar applications. This means that during the design, you can be sure your die is working properly and you can start manufacturing process.

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During the simulation of transfer dies, you can determine the reflections of press speed to your die and you can confirm part production in optimum speed even during design phase.

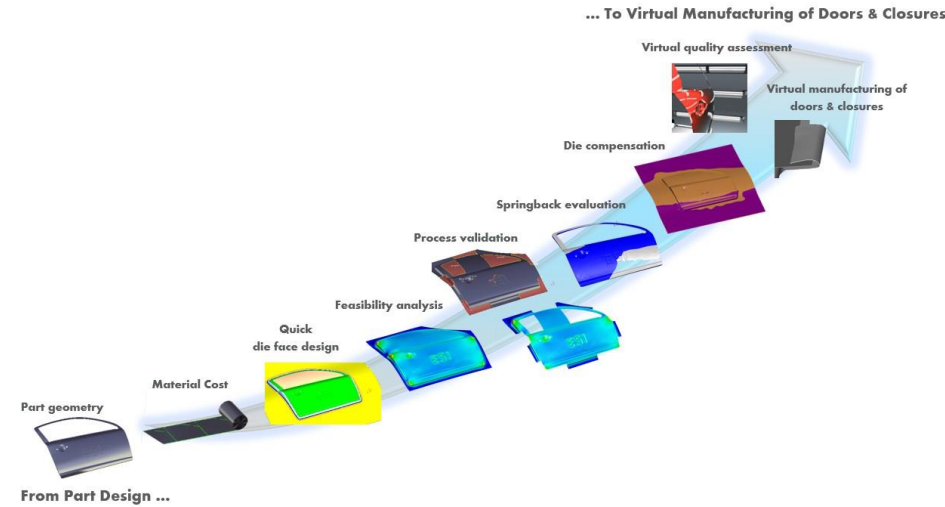


Welcome to the World of Design

•Software



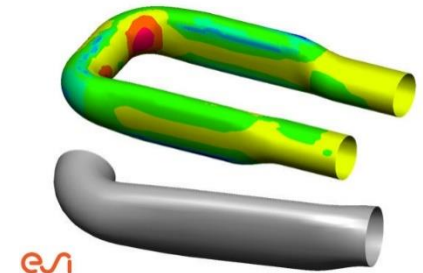
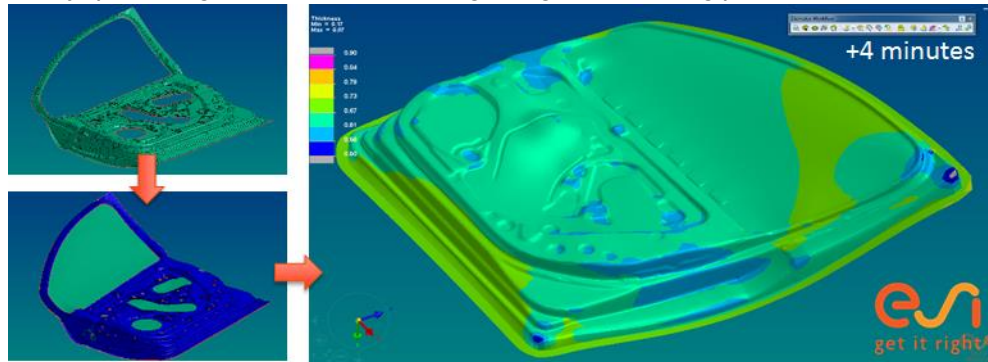
PAM-STAMP



Tkare Engineering is the distributor for Pam Stamp software in Turkey.

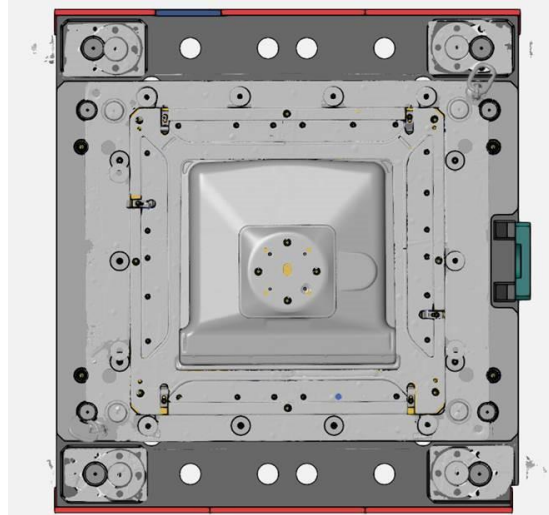
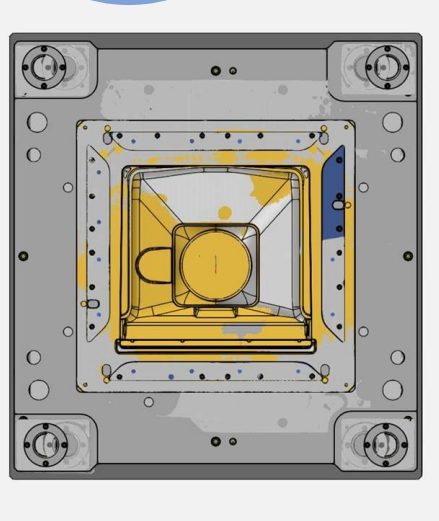
From Design/Concept to Try-out

For any given metal forming process, it is possible today to conceive everything in a virtual engineering equivalent - from detailing customer requests to virtually inspecting the final product, as well as setting-up the production facilities. This includes material cost estimation, die design and feasibility, part design validation and tooling design and forming processes.

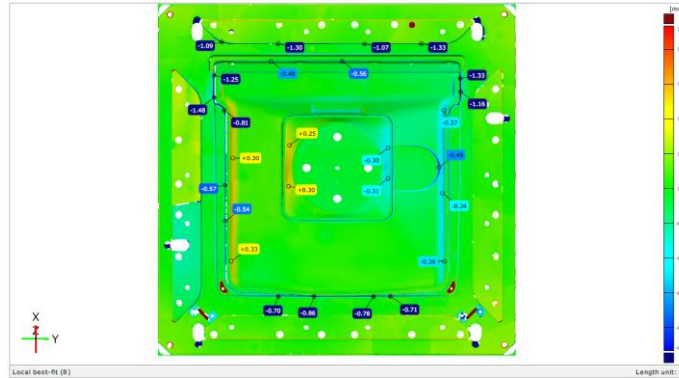


•Reverse Engineering

04

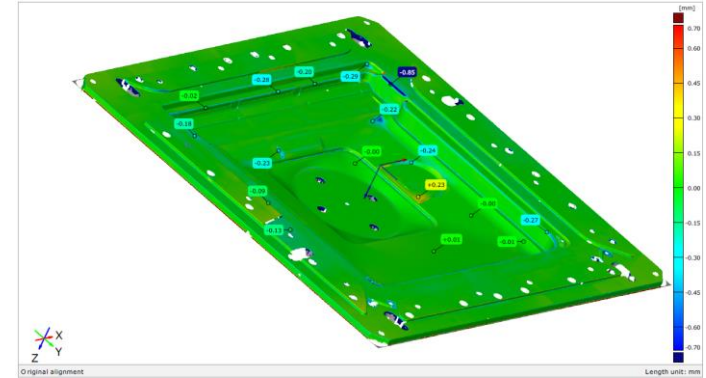


001

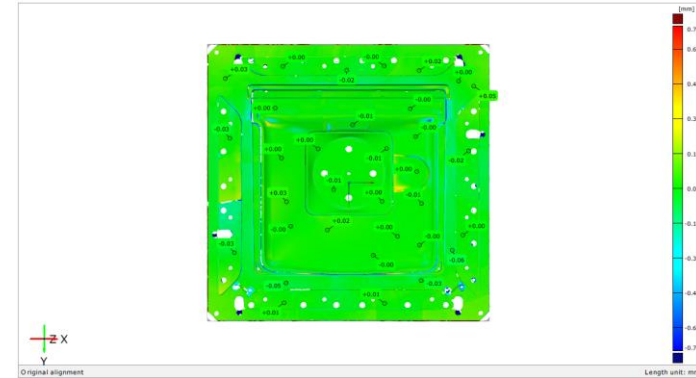


We are able to offer different services to our customers, especially with this method we use in the process verification phase.

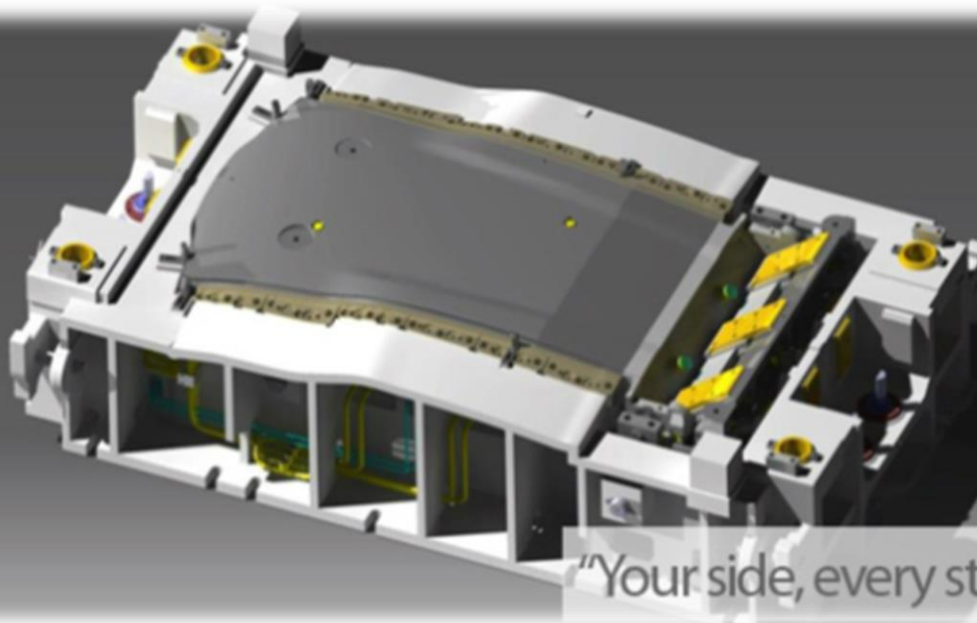
004



002



Welcome to the World of Design



"Your side, every step of your projects"

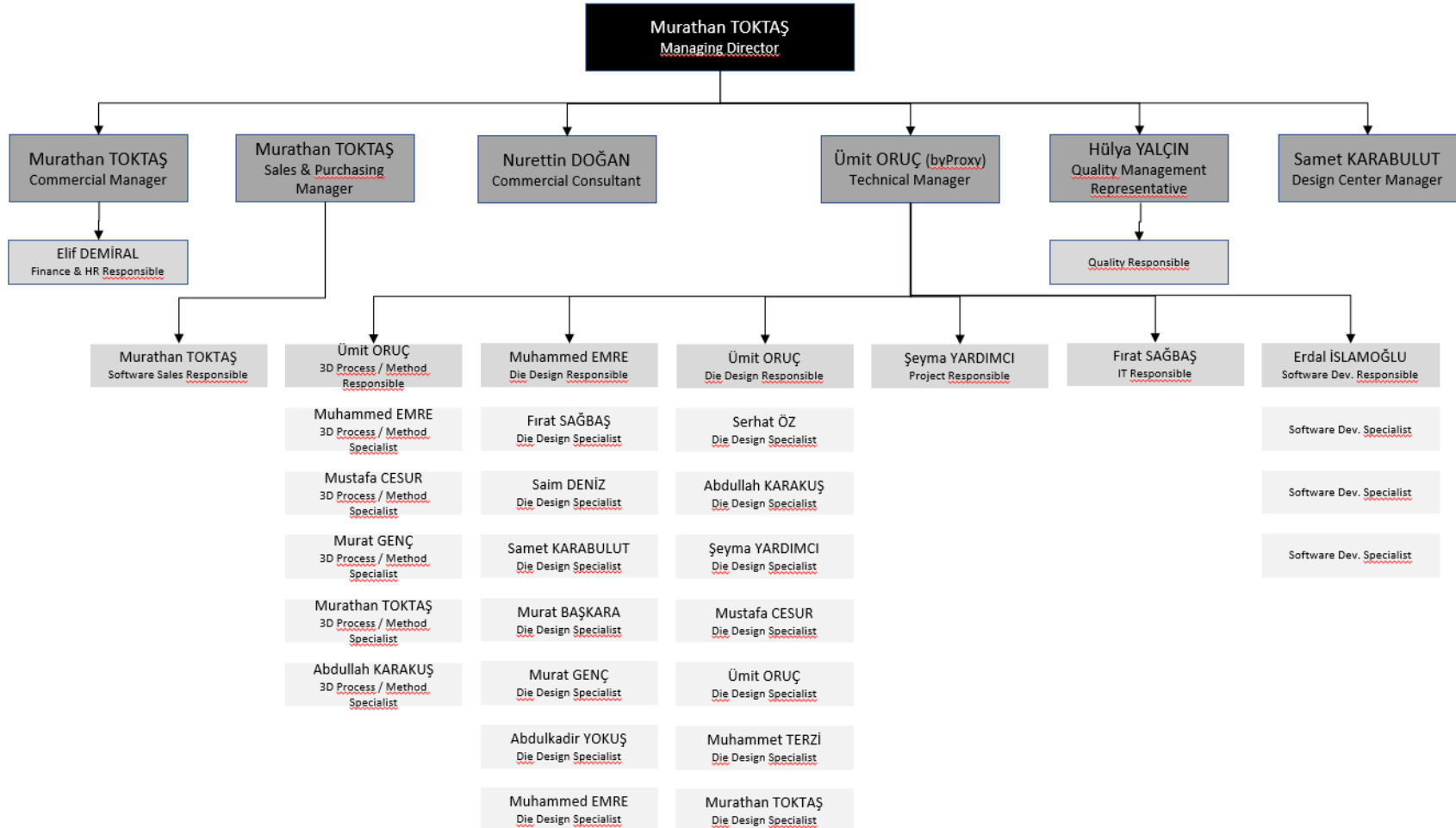
The capacity of Process & Simulation
1200 hours per month

The capacity of Tool & Die Design
3.000 hours per month

ORGANIZATION CHART



Welcome to the World of Design



OUR SOFTWARES (we can use)



Welcome to the World of Design



3D SOLIDWORKS



Cad Softwares



PAM-STAMP

AUTOFORM
Forming Reality

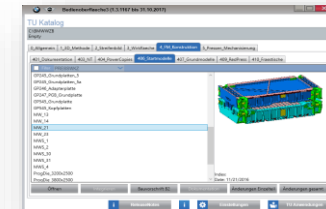
Simulations Softwares



Kinematic
Analysis Software
(Tool and transfer
system analysis)



FORD MOTOR COMPANY
"POWERTOOLS"



BMW
"CARISMA"

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REFERANCES (Direct)



Welcome to the World of Design



REFERENCES (Direct / White Goods)



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B/S/H/
BOSCH AND SIEMENS HOME APPLIANCES GROUP

 **arçelik**

VESTEL

Haier



izmir® kalıp
TOOL & STAMPING TECHNOLOGY CENTER

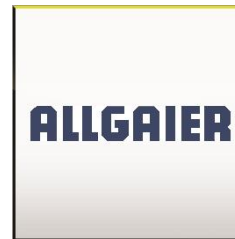
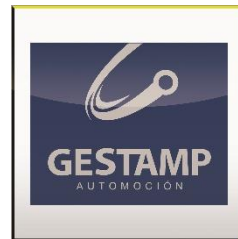
SKP
Makina ve Kalıp

 **KALMAKSAN**
ENDÜSTRİYEL KALIP VE MAKİNA SANAYİ A.Ş.

DESIGN MADE SOME OEM's (Indirect)



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THANK YOU

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