



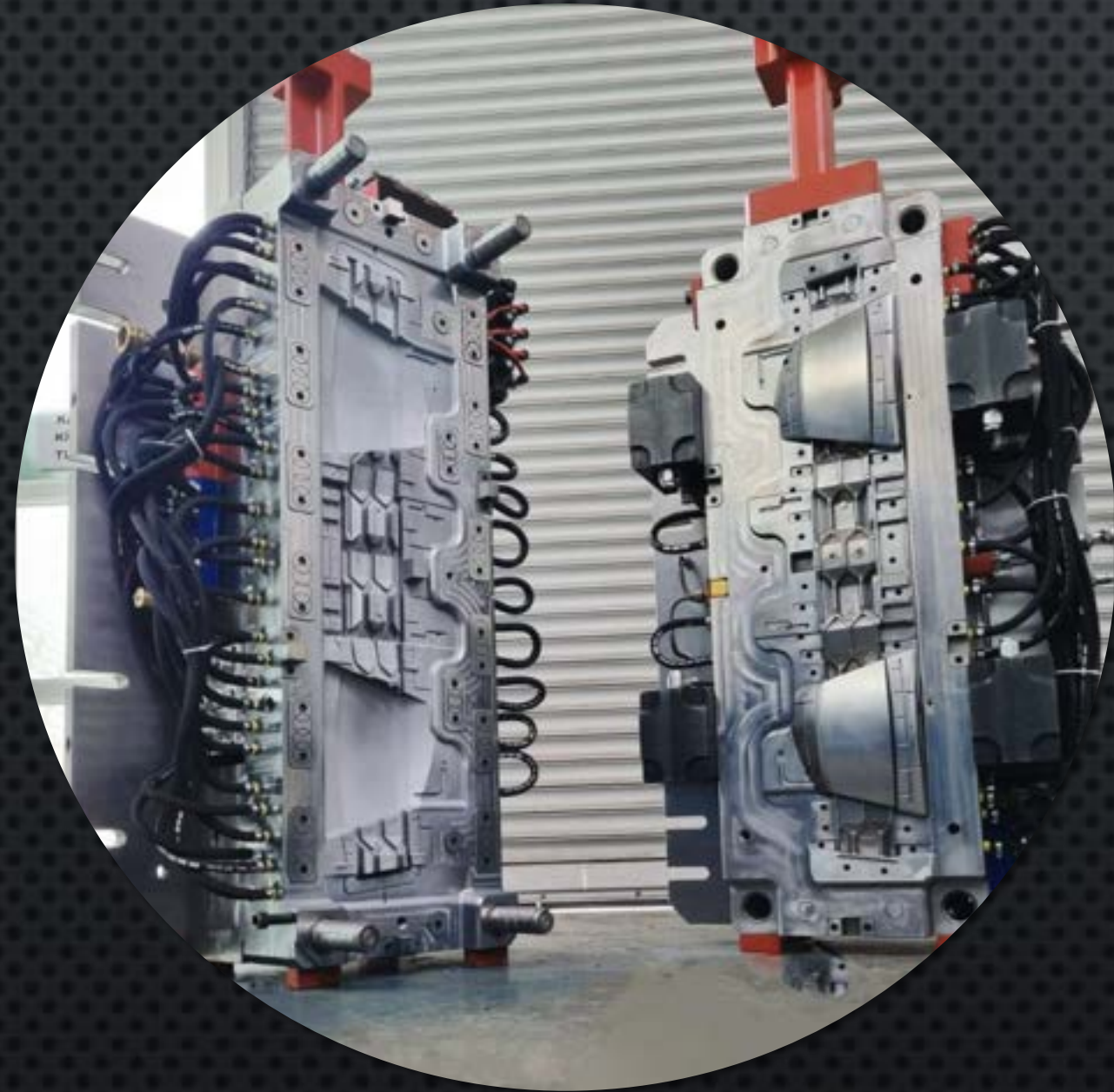
 **OPTIMUMTECH**



 **OPTIMUM MOLD**

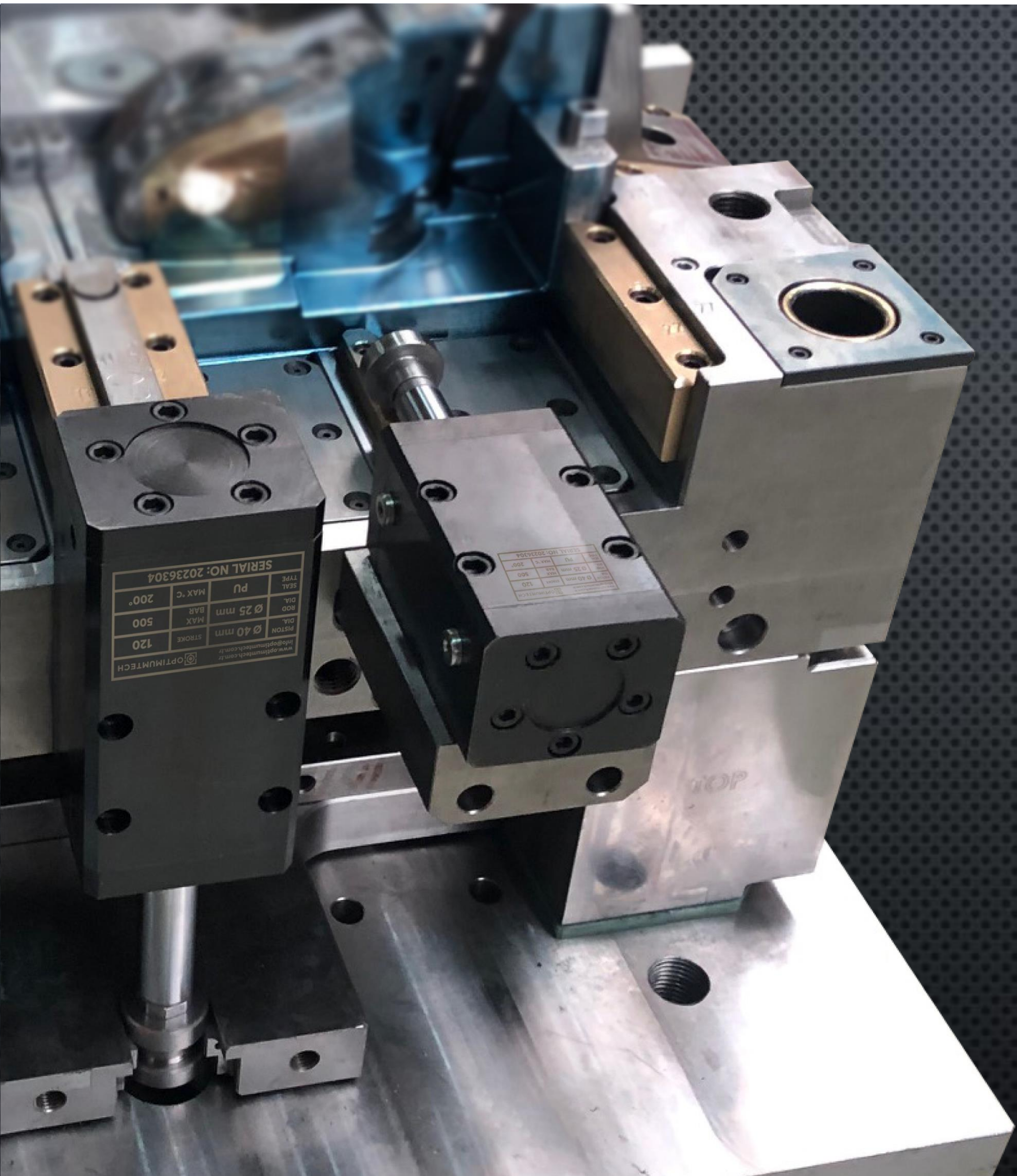
**YOUR RELIABLE PARTNER**

 **OPTIMUM** HYDRAULIC CYLINDERS



**Kocaeli / Türkiye**

# ABOUT US



Specialized in making automotive,  
white goods and electrical part molds.  
We also produce hydraulic cylinders inhouse

Plant-1: Toolmaker + Hydraulic producer = 500 m2 (13 person)  
Plant-2: CNC Milling area = 1.000 m2 (13 Person)  
Total = 1.500 m2 closed area

Total 26 employers;

- 2 project engineers (2 English)
- 2 designers (1 English)
- 3 tool assembly team + 1 polish technician

Our total turnover;

- In 2022 will be about 1 million euro
- In 2023 estimation 2 million euro

**ISO 9001**

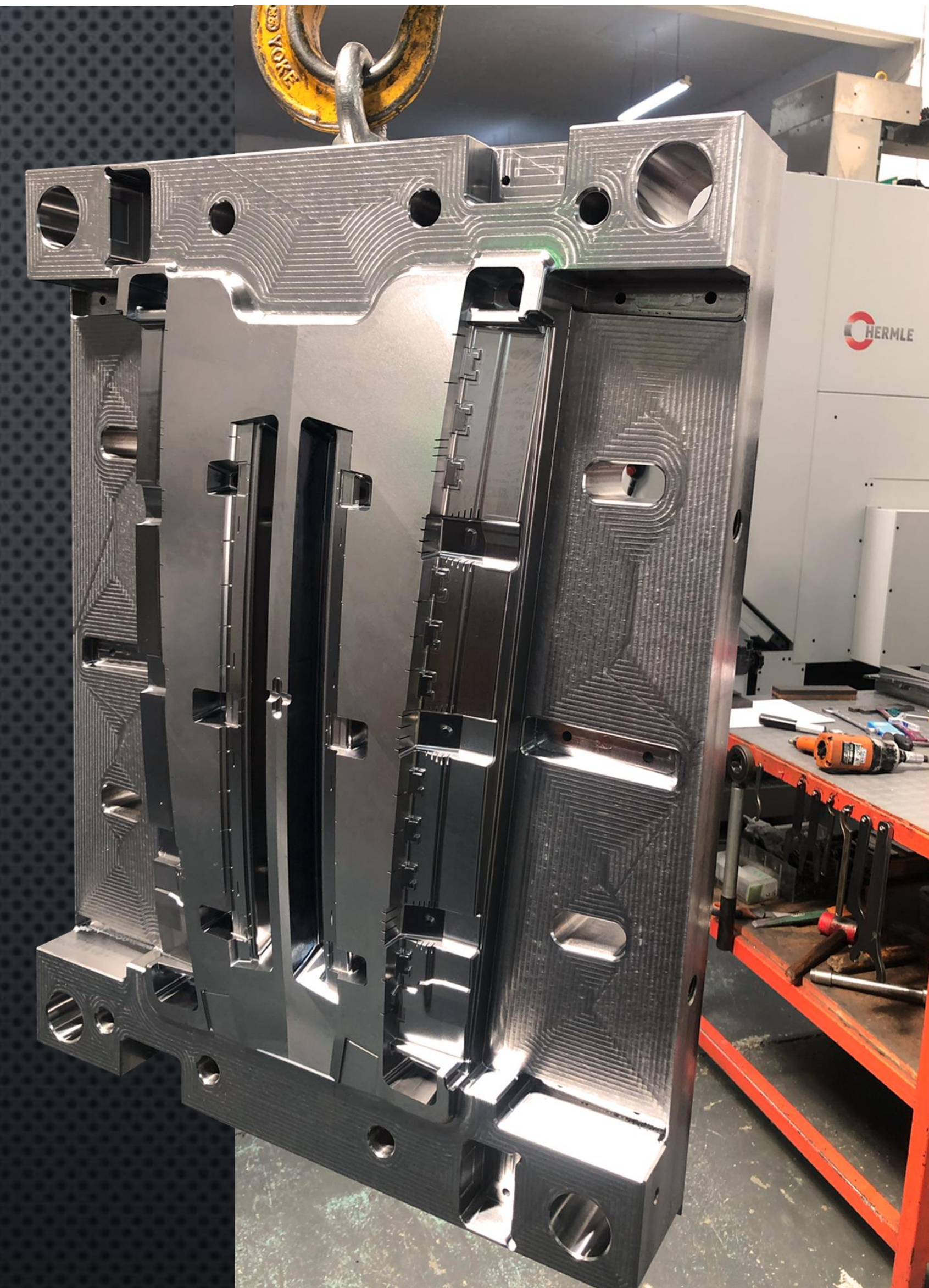
- **2015 certified**



# OUR ABILITIES

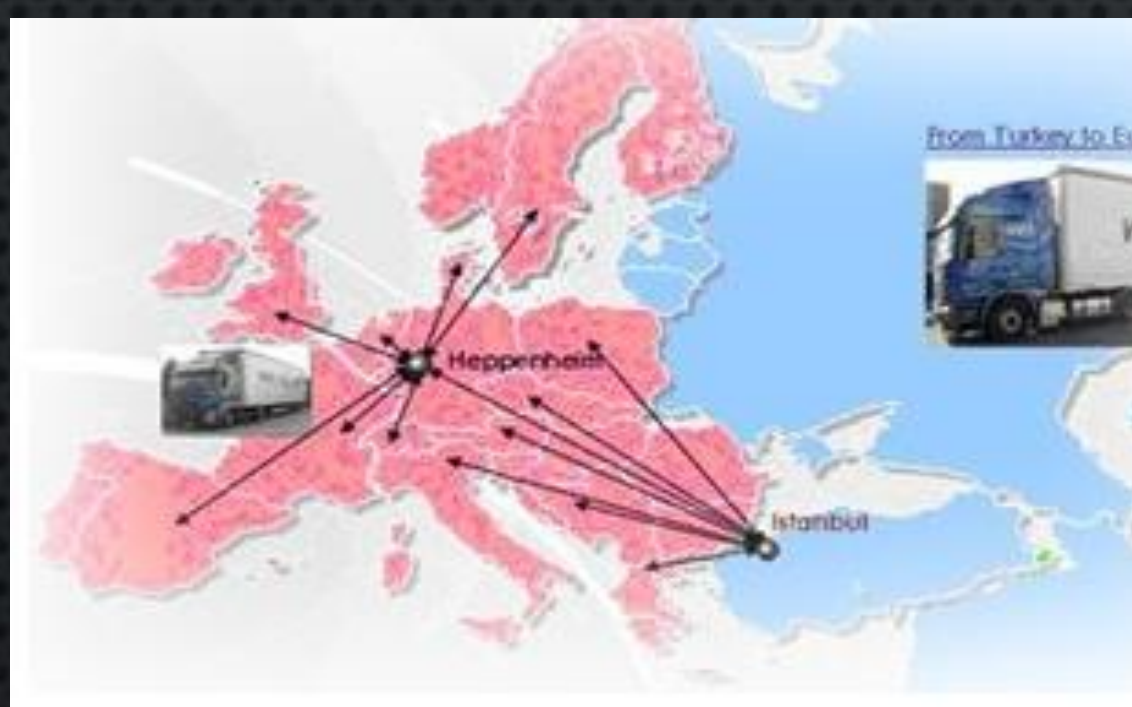
We make Mold Production with High Quality and Short Delivery Time;

- Plastic Injection Tooling
- Modifications,
- Prototype tools, Overmold tools,
- High Gloss tools and Optical Tools.
- Especially Automotive Lightining Tools
  
- Preparing Quotation very quickly
- Prepare DFM Report with first 3D data (max 1-2 week)
- Mold Flow Study Step-1 and Step-2 (Cooling, Filling, Warpage)
  
- Mold weigth up to 20T max tool size: 2.400x 1.500 mm
- General tonnage from 50T to 1.000T injection press



# COMMUNICATION & TRANSPORT : Easy to Handle

- ✓ Max. flight time from Istanbul to Germany is 3 hours and there are 2 international airports in Istanbul.
- ✓ Truck transports by road, ferry or flight
- ✓ Maximum transport time: 8 days (1 or 2 days for customs clearance)
- ✓ Cost of whole truck  $\approx$  3000,- to 3500,- €



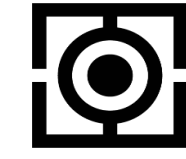
Road



Ferry / Road



Ferry / Train / Road



ADDRS	İmes Sanayi Sitesi D9 Blok No:2 Dilovası / KOCAELİ	TO:	
PHONE	0(262) 502 02 02	ATTN:	
WEB	<a href="http://www.optimumtech.com.tr">www.optimumtech.com.tr</a>	DATE:	11.07.2023
PROJECT		REF:	2023-101_REV00

No.	Description	Part View	Cavity Number	Mold Base / Cavity Core Steels	Grain Type	Gate Type	Tool Lead Time / (After design approval)	Tool Price
1	Map Pocket Upper LEFT / RIGHT		1+1	Set:1,1730/ Çelikler 1.2738 HH 33-37HRC	P192	Hot runner, Manifold with 1 DROP OPEN GATE PER PART HRS	16 WEEKS	0 €
2	Map Pocket Lower Plastic LEFT / RIGHT		1+1	Set:1,1730/ Çelikler 1.2738 HH 33-37HRC	P192	Hot runner, Manifold with 3 DROP VG PER PART (3+3 TOTAL) HRS	18 WEEKS	0 €
3	Pull Cup Support Bracket Plastic LEFT / RIGHT		1+1	Set:1,1730/ Çelikler 1.2738 HH 33-37HRC	n/a	Hot runner, Manifold with 1 DROP OPEN GATE PER PART HRS	14 WEEKS	0 €
5	Pull Cup Screw Plug (9854094980 00) LEFT / RIGHT		1+1	Set:1,1730/ Çelikler 1.2738 HH 33-37HRC	P192	Hot runner, Manifold with 1 DROP OPEN GATE PER PART HRS	10 WEEKS	0 €
6	Trim Latch RIGHT		1	Set:1,1730/ Çelikler 1.2738 HH 33-37HRC	P130	Hot runner, Manifold with 1 DROP OPEN GATE PER PART HRS	18 WEEKS	0 €
Total								0 €

REMARKS / AÇIKLAMALAR :	
1	Payment terms: 40% with PO and order, 30% after T1 tryout within 2 weeks, 30% tool approval
2	Price quoted including T1, T2, T3 tryouts Sampling with 200 shots each
3	Price does not include any GRAIN (texture) & PPAP, unless any special remark
4	Spare parts are optional at additional cost which is not included in this quote.
5	Quotation Validity: 30 days only.
6	Mold warranty covers 1-year after mold shipment, Mold life warranty is only valid when customer makes regular maintenance
7	Raw material, resin for Tryout will be given from Customer
8	Our quotation is prepared according to current 3D data and information if you send us new data we will update our quotation

OPTIMUMTECH  
Murat KAYAR / Gsm: +90 535 378 26 63

# CERTIFICATES & SOFTWARES



## CAD



2 Stations

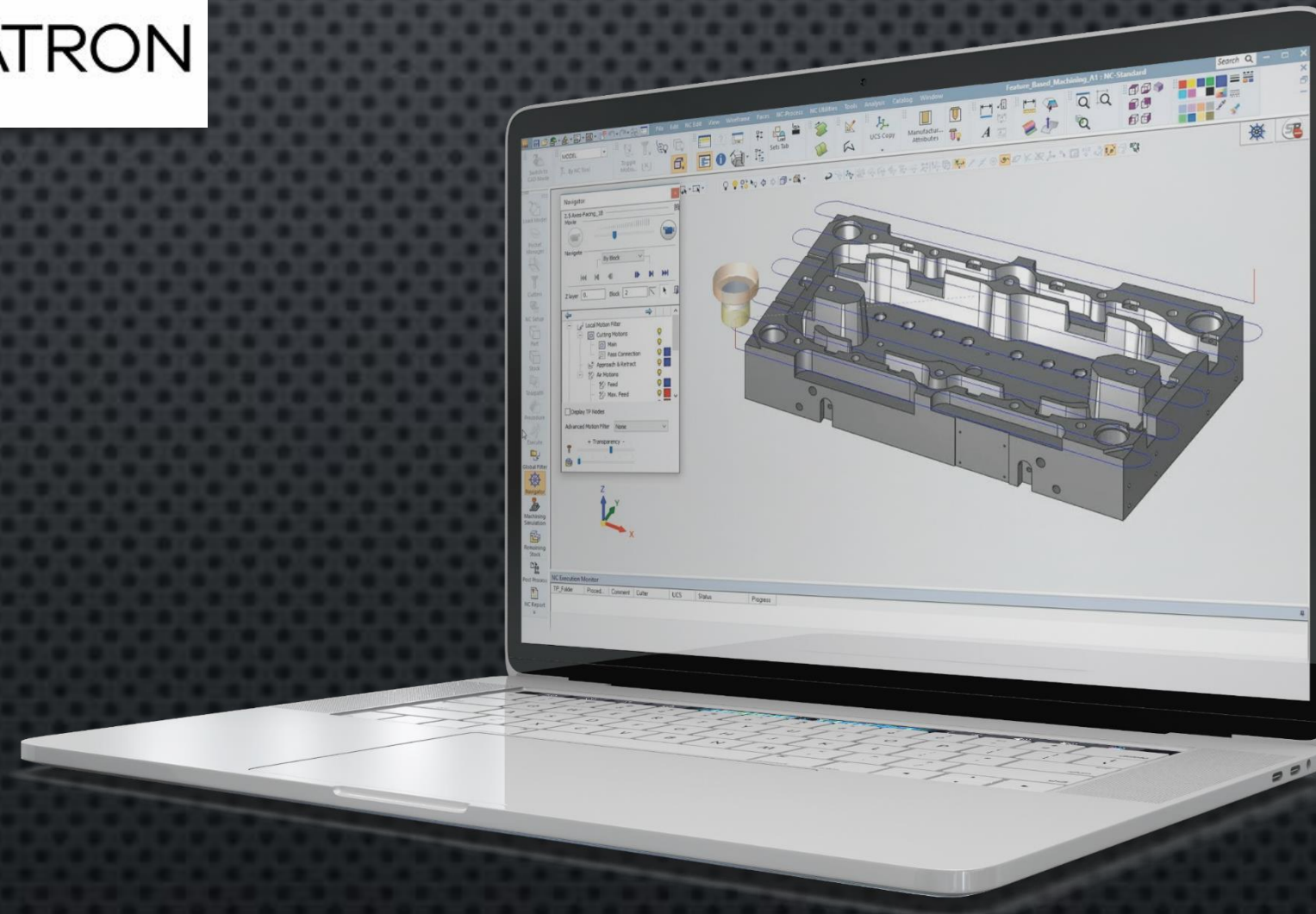


3D Tool

## MOLDFLOW



1 Station



## CAM



3 Stations



3 Stations

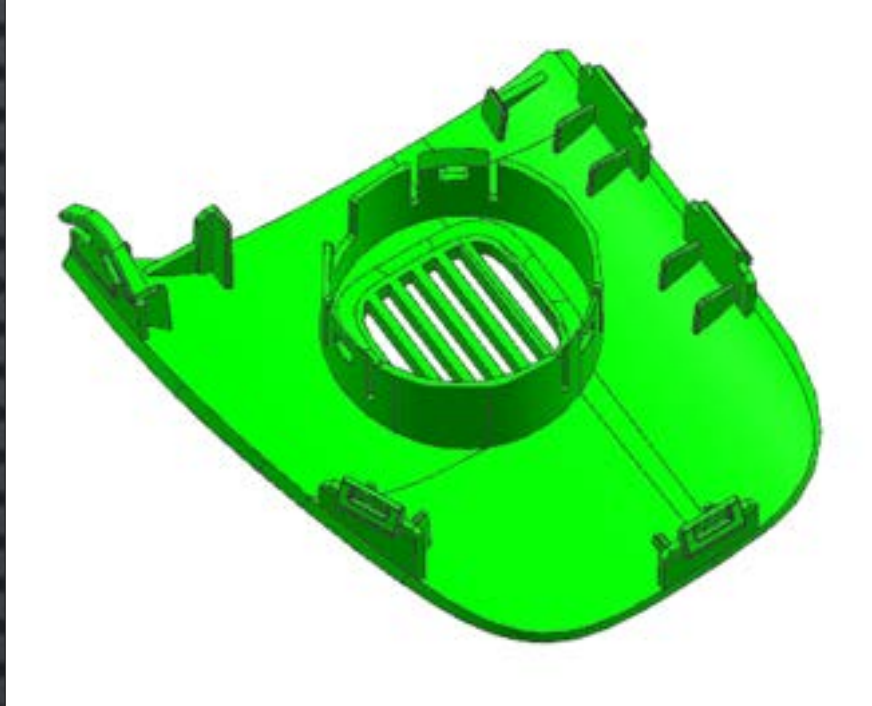


# DFM Report and Part Feasibility

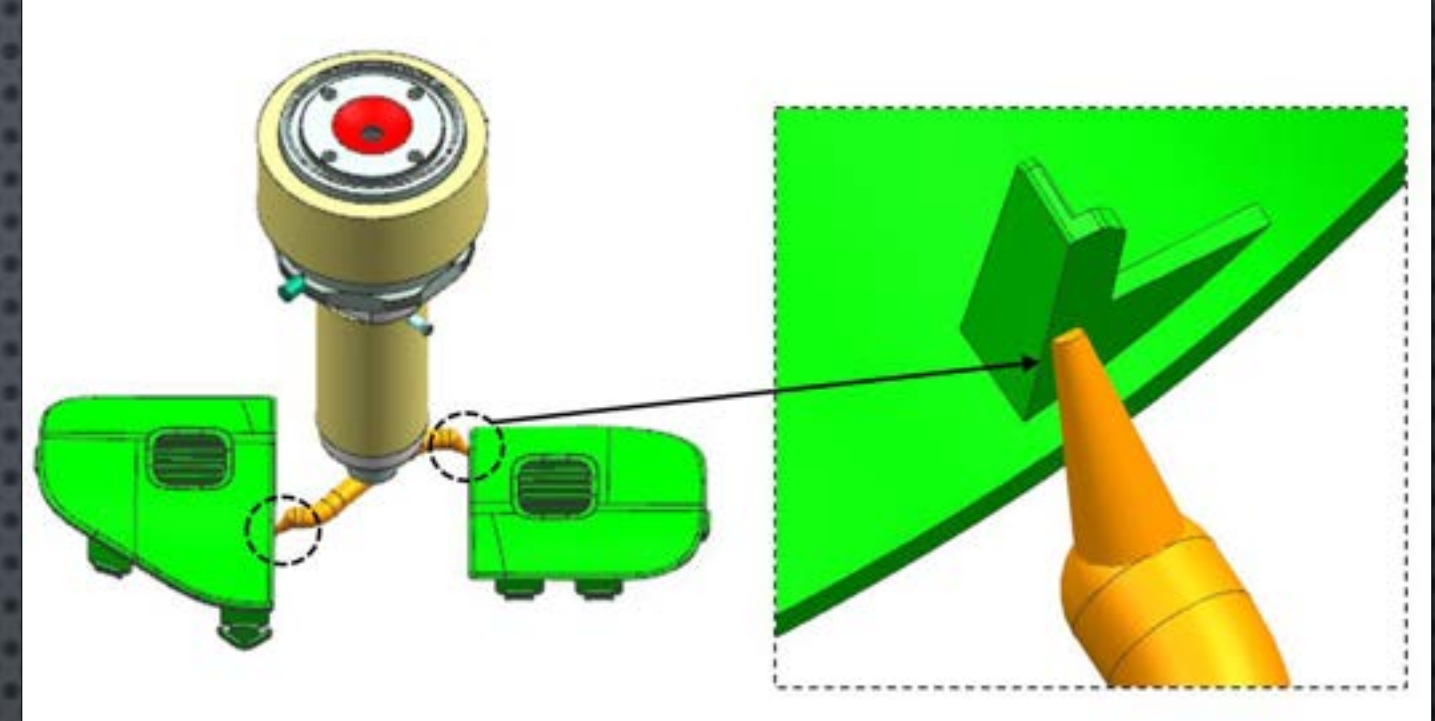
## Part Informations

- Material Type: PP-TD30
- Injection Machine Inform: 250T
- Shrink Selected: %0,16
- Cavity: 2
- Part Size: 68.92X66.51X36.87
- Average Part Thickness: 2.5mm

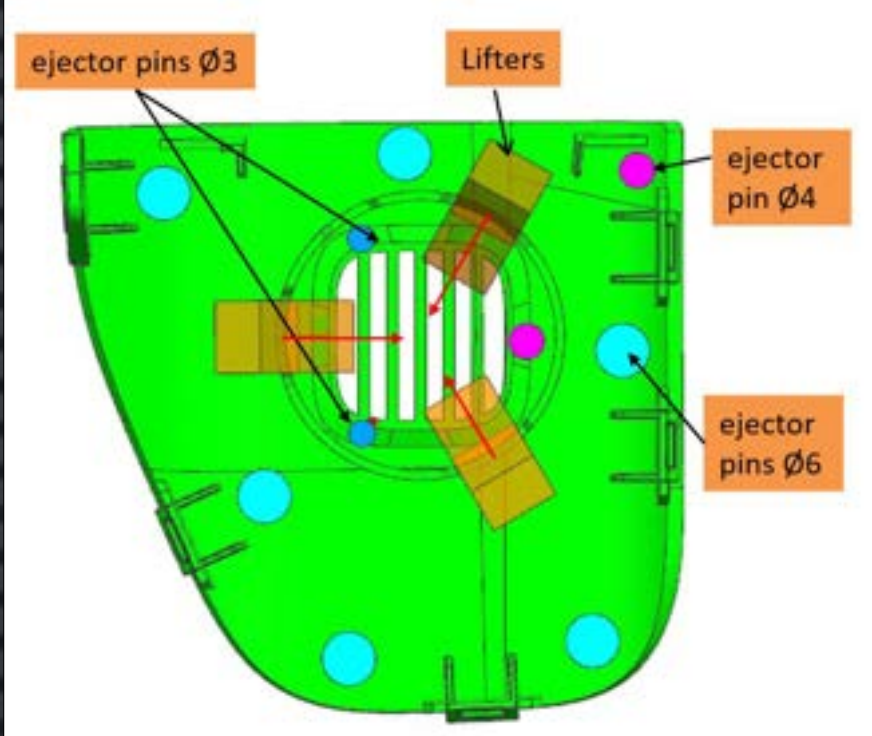
## Part view



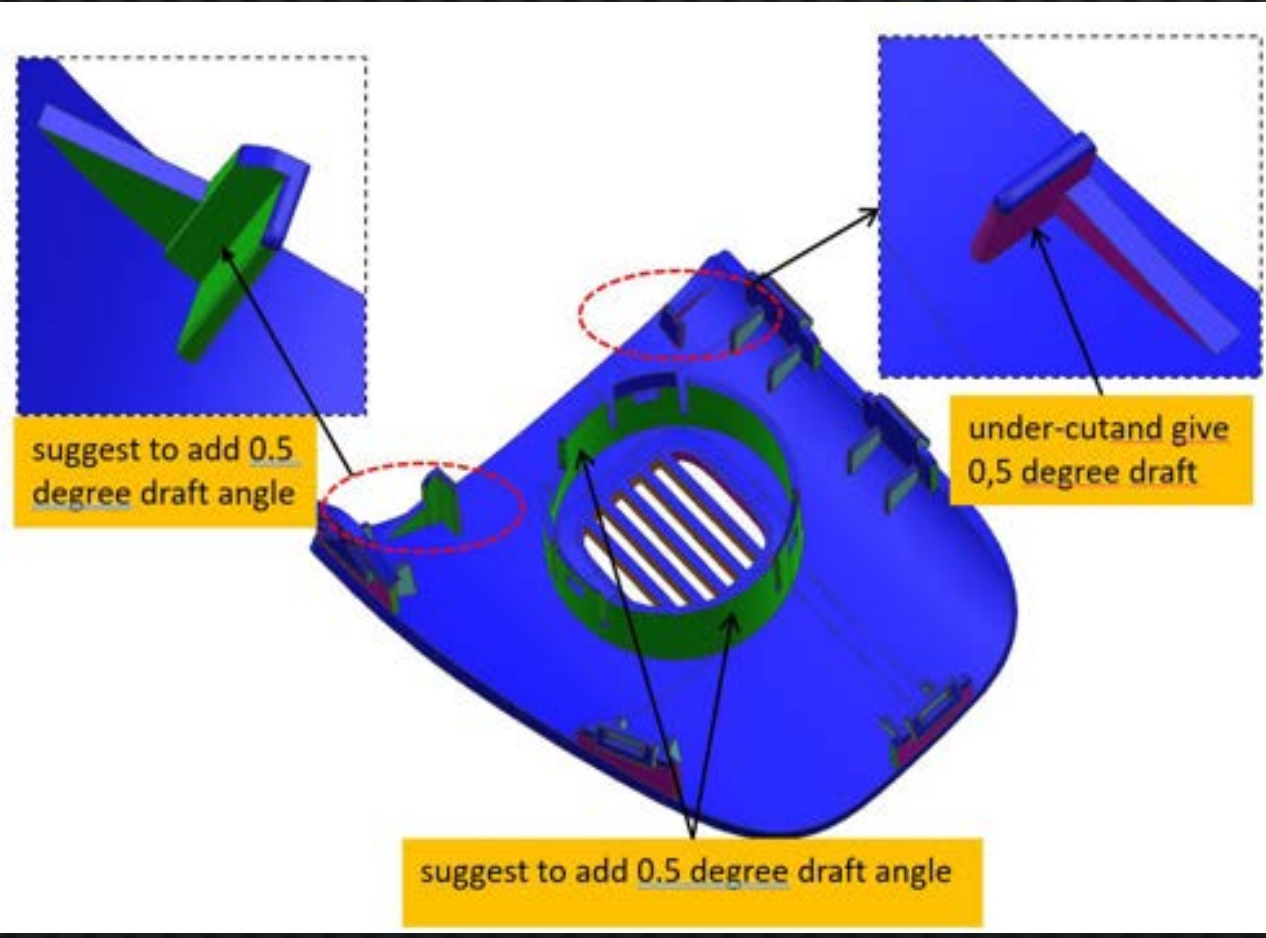
## Gate Locations



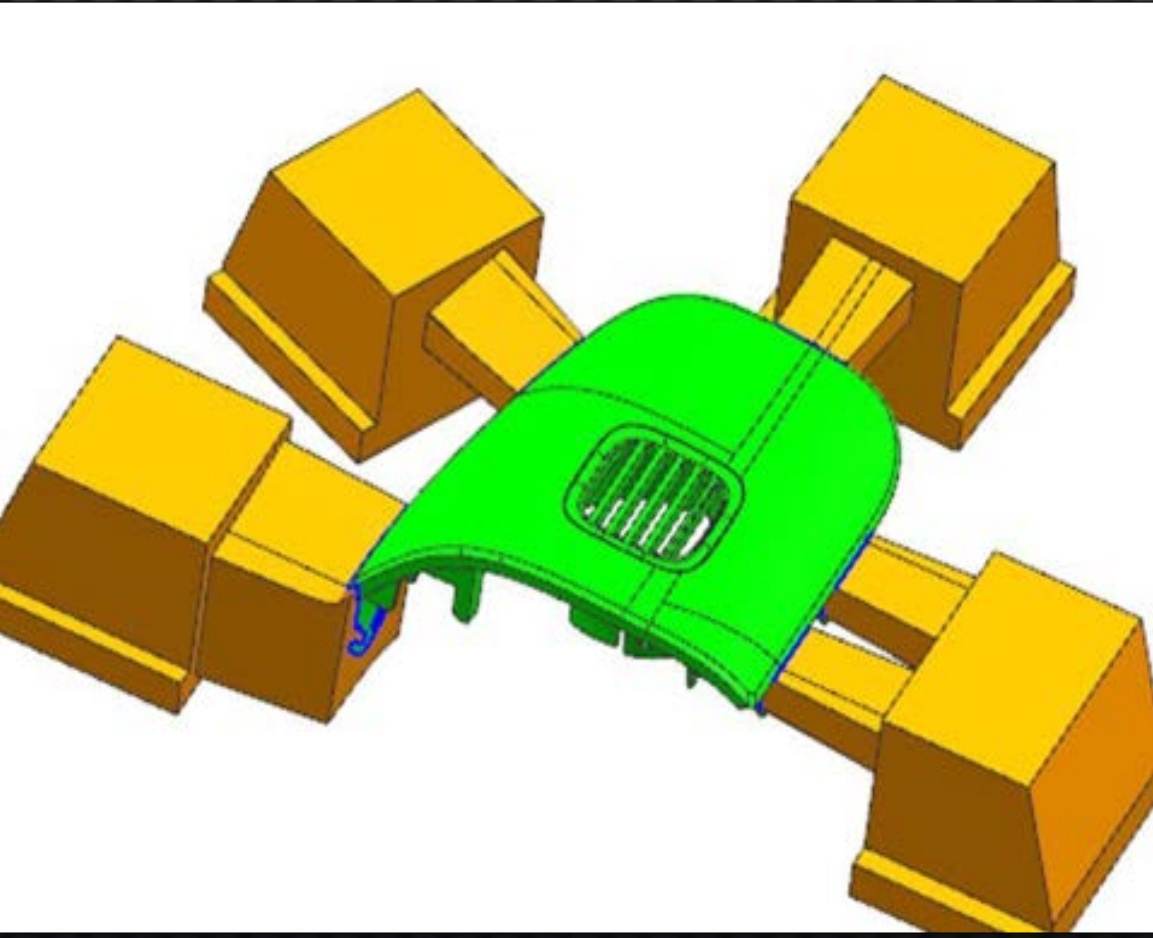
## Ejectors



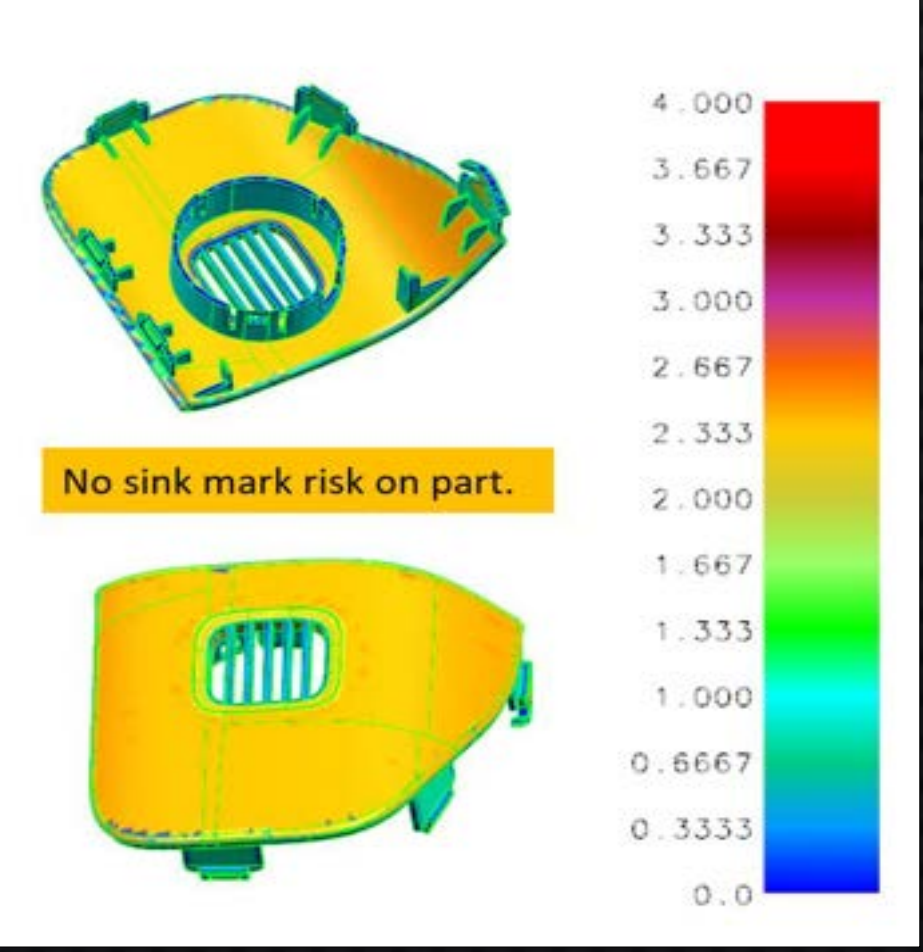
## Draft problems



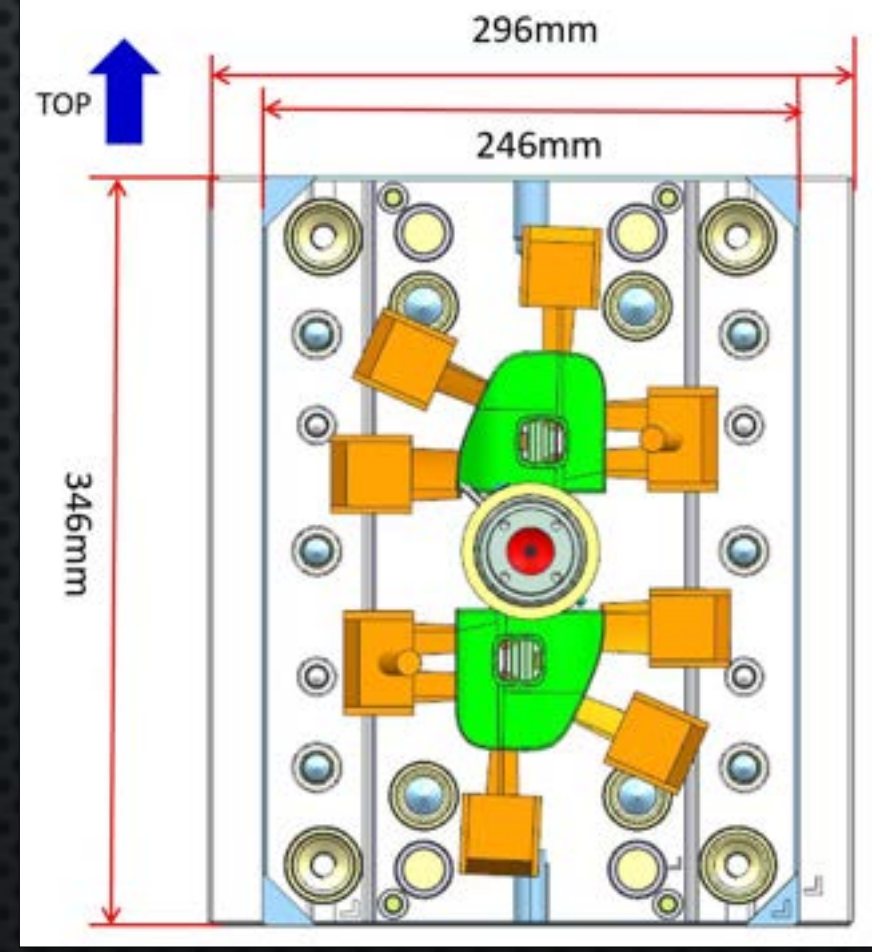
## Sliders Concept




## Filling Study

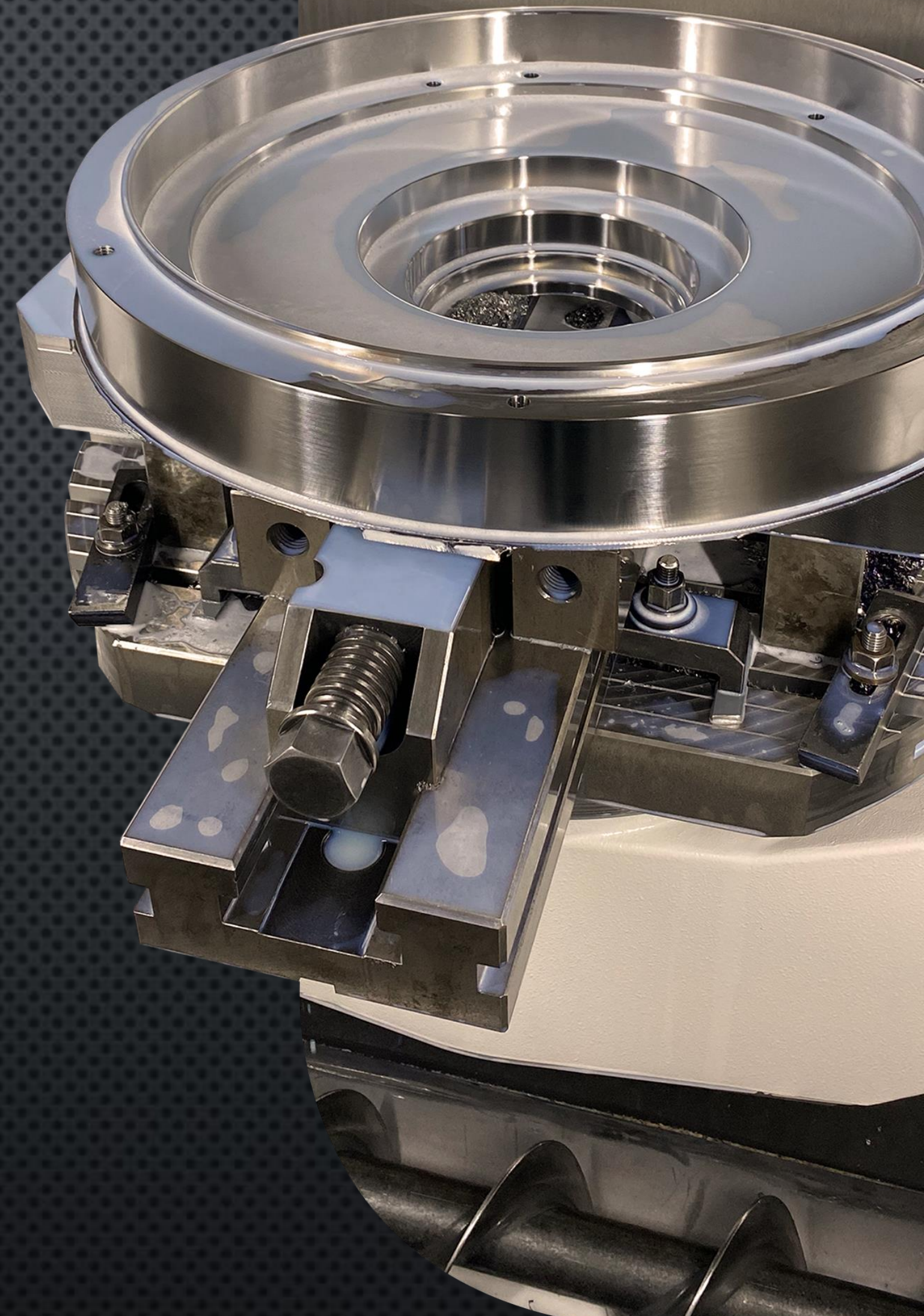
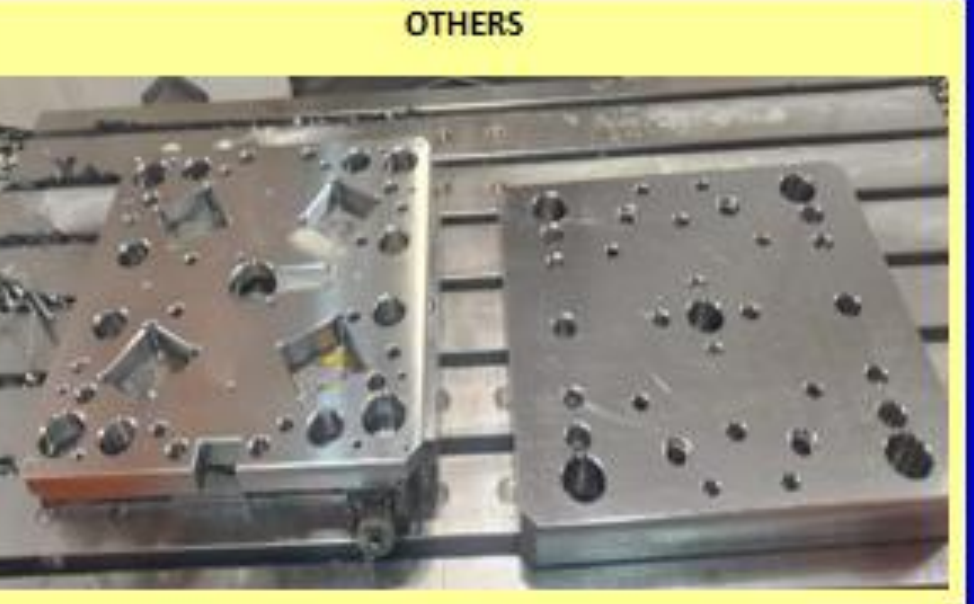


## Tool Layout



# TOOL PLAN

OPTIMUMKALIP		TOOL PRODUCTION PLAN			SECTION/VERSION (%)		PART PICTURE										
CUSTOMER: CUSTOMER		CAVITY: 2+2	3D DATA LEVEL: 14Z-PANDA_BRACKET_TKO_20230824														
MOLD CODE: FMP-23-03		PART NAME: BRACKET L+R	MILLING RELEASE: W35-2023														
N°	Description of Operations	Planned Lead Time			Work Progress %										Current Lead Time		
		Weeks	Days	Hours	10	20	30	40	50	60	70	80	90	100	Weeks	Days	
1	3D Design Release	2	33	34												32	33
2	Mixed Date	1	34	35												35	35
3	CAD	5	35	39												35	39
4	Conventional Milling	1	35	35												35	35
5	Rough CNC Milling	1	37	38												36	36
6	Drilling/Coating	1	36	37												36	37
7	Final Treatment	1	39	40												37	38
8	Final CNC Milling	1	40	41												38	38
9	EDM / WEDM	1	42	42												38	38
10	Pre-Polishing	1	42	43												38	38
11	Assembly First Planner	1	43	43												38	38
12	Conventional Milling	1	35	35												35	35
13	Rough CNC Milling	1	35	37												36	36
14	Drilling/Coating	1	35	36												36	37
15	Final Treatment	1	37	38												37	38
16	Final CNC Milling	1	38	39												38	39
17	CNC Electrical Milling	3	39	39												38	39
18	EDM / WEDM + Electrolysis	1	39	40												39	39
19	Pre-Polishing	1	40	41												39	39
20	Milling Inserts / Slides / Lenses	2	41	43												38	41
21	3D Phase Planning	1	39	39												38	38
22	3D Assembly and Milling	2	42	44												38	41
23	First Machining test: (T1 TRYOUT)	1	44	44													
24	Dimensional check of residual parts	1															
25	Construction and tooling	1															
26	Gate	1															
27	3D Assembly	1															
28	T1 Machining test: (T1 TRYOUT)	1															





# CNC MACHINES



## HERMLE C650

X:1050mm Y:900mm Z:600mm

18.000 rpm  
1500 kg Table Load

## GF MILL P 800 U

X:800mm Y:800mm Z:500mm

20.000 rpm  
1000 kg Table Load

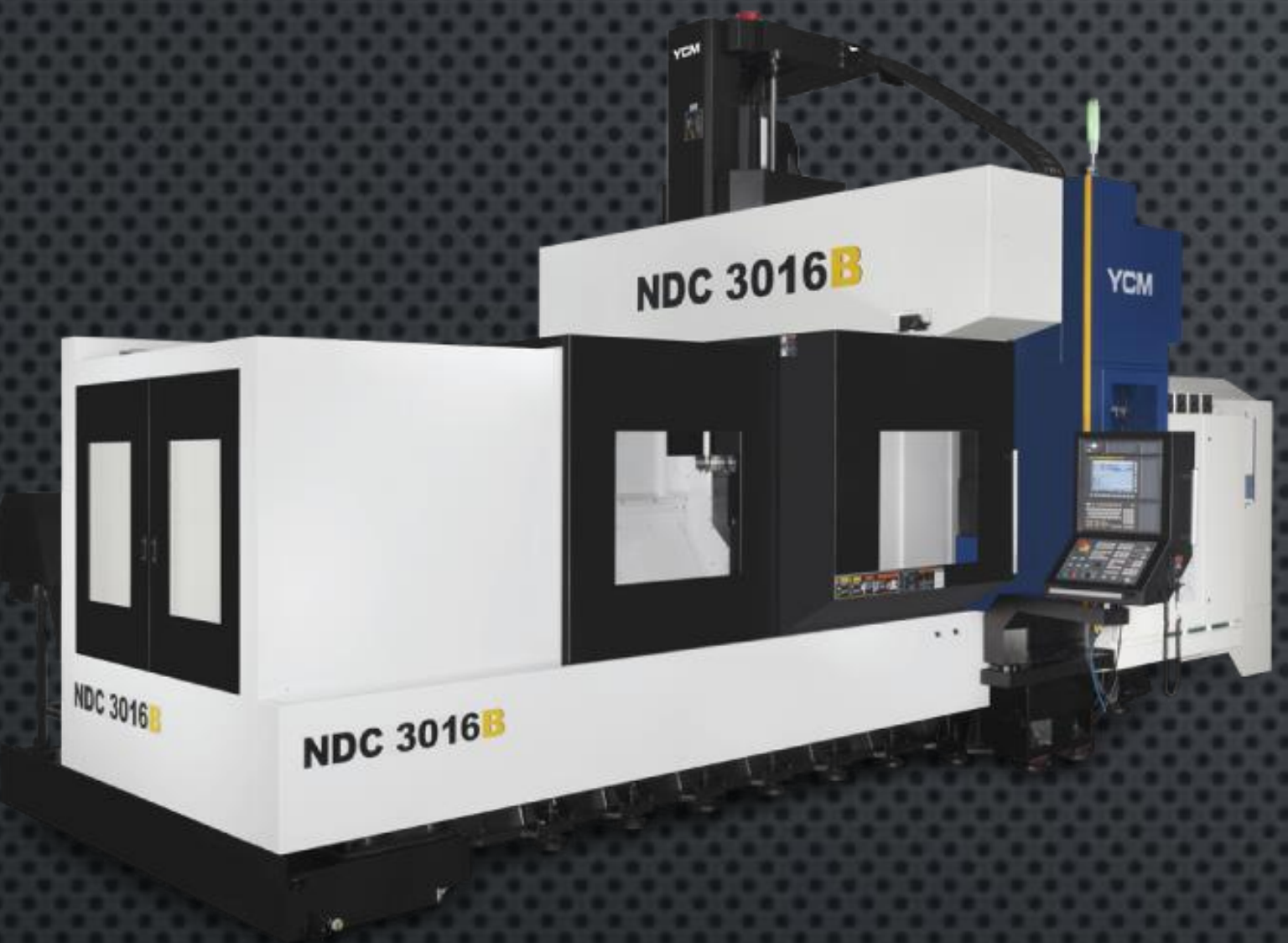
## YCM NMW 106 A

X:1060mm Y:600mm Z:600mm

12.000 rpm  
1000 kg Table Load



# CNC MACHINES



**YCM NDC 3016 B**  
X:3200mm Y:1600mm Z:954mm  
10.000 rpm  
10000 kg Table Load  
Model Year: 2016



**HAIMER**  
Tool Dynamic Preset Microset  
(for Balancing and Presetting)



**YCM NDC 3016 B**  
X:3200mm Y:1600mm Z:954mm  
10.000 rpm  
10000 kg Table Load  
Model Year: 2022



# EDM & CONVENTIONAL MACHINES



**EXCELLENT ZNC 760**



**OSCARMAX SINKER**  
EDM S430  
X:400mm Y:300mm Z:250mm

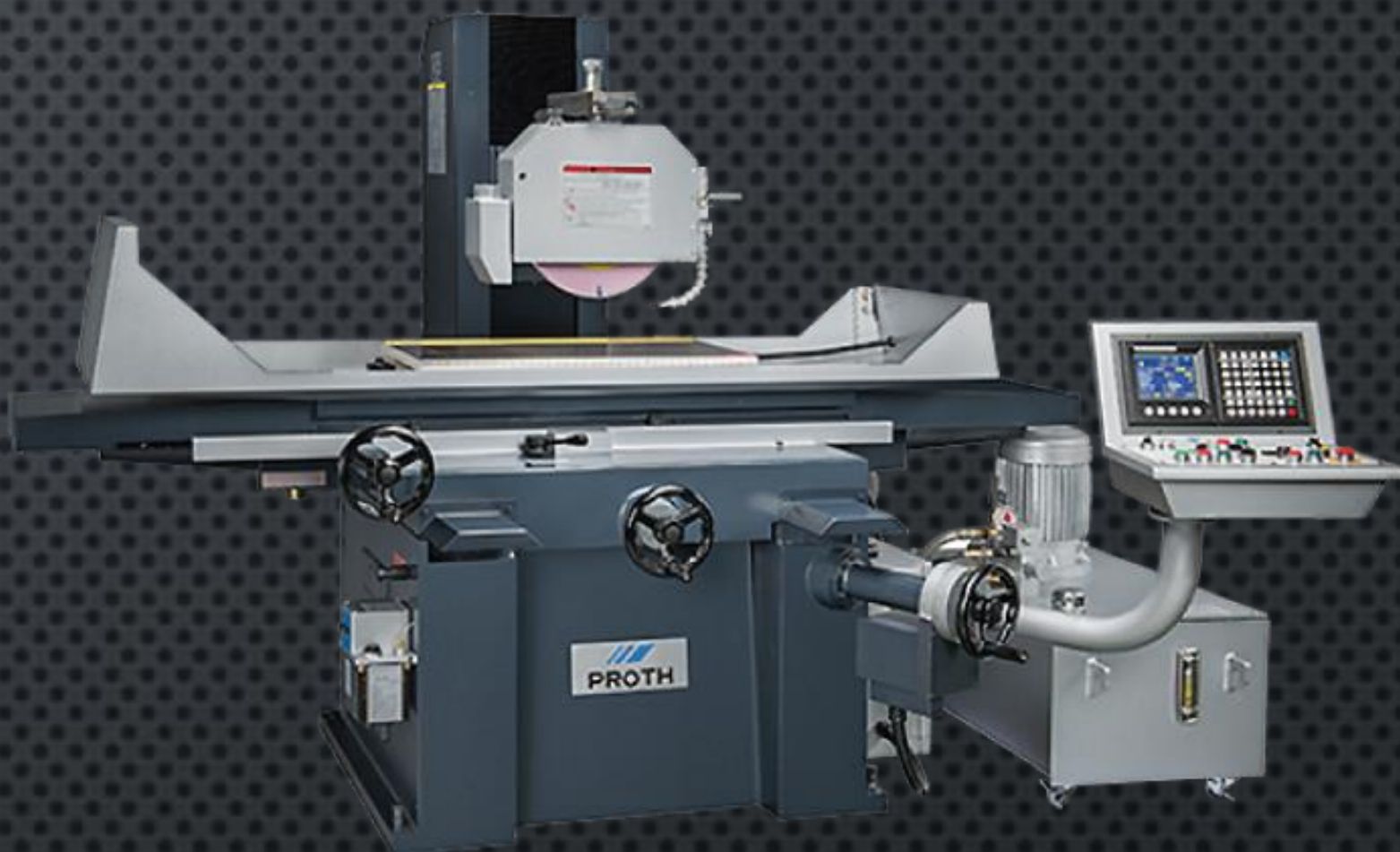
# LATHE & SURFACE GRINDING MACHINES



**OKUMA GENOS L3000-e  
CNC Lathe**



**TOS SN50 LATHE  
500x1500 + Digital Scale**



**PROTH 8040 NC  
SURFACE GRINDING  
X:1100mm Y:480mm Z:450mm**



# INVESTMENT DONE

**MAKINO D800Z  
5 AXIS MACHINE  
JULY 2024**



**SXKH SPOTTINGPRESS 120T  
1.400 x 1100 x 1470 mm  
DECEMBER 2023**



**CMM MEASUREMENT  
DECEMBER 2023**



# INVESTMENT DONE

**GF MIKRON G800  
5 AXIS CNC MACHINE  
NOVEMBER 2023**



**SODICK EDM  
AL 80G  
800x520x420 mm**



**AL80G Die Sinker EDM**

**SODICK WEDM  
ALC 600 GH  
600x400x500 mm**



**Sodick ALC600GH Precision Wire-cut EDM Machine**

# 2024 INVESTMENT PLAN

**GF MIKRON VCE 1000  
3 AXIS CNC MACHINE  
DECEMBER 2023**



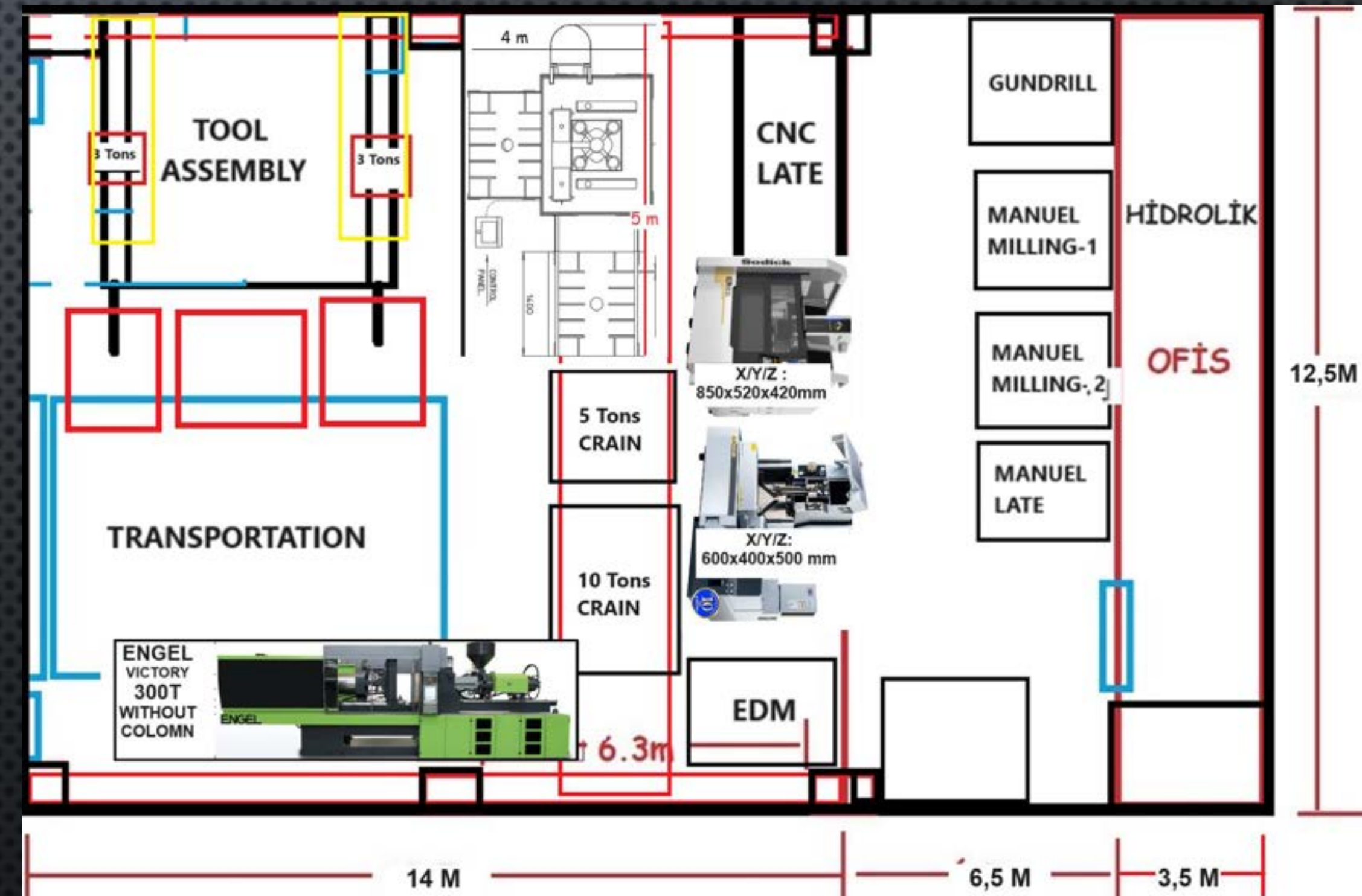
**5 AXIS CNC MACHINE  
DMU 125 P**



**ENGEL 300T INJECTION MACHINE**

# TOOL SHOP

**TOOL SHOP : 500 m<sup>2</sup>**  
**Production : 370 m<sup>2</sup>**  
**Office : 130 m<sup>2</sup>**





# TOOL TRYOUT DOCUMENTATION

Customer:	---
Tryout Machine:	650 T KM
Tool Dimensions(mm):	640x460x450
Tool Weight(T):	1.5 T
Part Weight(g):	235 gr



Tryout date:	18.04.2023
Raw Material:	PC-ABS

Tool Code / Kalıp Kodu	FMP-23-01	Part Name / Parça Adı	REAR FRAME	Tryout Date / Deneme Tarihi	27.12.2022
Raw Material / Hammadda Adı	PP	Part Weight / Parça Ağırlığı	401 gr/401 gr	Cavity Number / Kalıp Göz Sayısı	2

Injection Machine / Enjeksiyon Makinesi	ASIAN SUPERMASTER SM1250PV
temperatures / Sıcaklıklar	240

Injection Conditions / Enjeksiyon Şartları (Proses Şartları)									
Temperature / Sıcaklık									
240	235	230	225	220	215	210			

1	2	3	BACK SECTION	Hot Runner Temp. / Sıcak Yollukluk Tabanı	Cavity / Göz	Cone / Entek	Sider / Maça
110	110	110		30	30		

Receiving Pressures/ Mal Alma Basıncı	110	110	110				
Receiving Speeds/ Mal Alma Hızları	75	75	75				
Receiving Positions/ Mal Alma Pozisyonları	90	45	10				
Group Forwarder Pressure/ Grup İleri Basıncı	5	5	5				

Injection Pressures/ Enjeksiyon Basıncıları	90	90	90	90	90	90	
Injection Speeds/ Enjeksiyon Hızları			30	30	15	10	
Injection Stop Positions/ Enjeksiyon Pozisyonu			75	45	5	15	

Folding Pressures/ Ütölleme Basıncı	62	62	62				
Folding Speeds/ Ütölleme Hızları	45	45	45				
Folding Time/ Ütölleme Zamanı	2	2	2				

VALVE GATE Time/ Zamanı	1	2	3	4	5	6	7	8	Hot Runner Temp. / Sıcak Yollukluk Tabanı	240
	0	0	0	0	0	0	0	0		

Injection Speeds / Enjeksiyon Zamanları	Machine/ Makine	Receiving / Mal Alma	Enj.	Part / Ütölleme	Holding / Soğutma	Cooling / Soğutma	Ejectors / İtici/Sıkıştırma	Total Cycle Time / Toplam Çevrim
	Open	Close						
	3,38	3,30	5,42	12,80	6,00	40,00		73,70

Enjeksiyon Doldurma	Yes	No
-Are the runners filled balanced even at half pressure? / am baskı da yollukluk dengeli doluyor mu?	X	
-Does it stay in half balanced filled and fill the cavities even? / am baskı da kalıp gözetli dengeli doluyor mu?	X	
-Does it stay in full pressure and fill the eyes even? / am baskı da kalıp gözetli dengeli doluyor mu?	X	
-Do you use silicon for part away? / ayrıca kullanılıyor mu?		X
-Do you use insulation plate on cavity side? / kalıp dışı bağlantı plakası izolasyonu yapılmış mı?		X

Tool Work Conditions / Kalıbın Çalışma Değerlendirilmesi	Yes	No
-Coolings are OK on tool? / Kalıba su bağlanmış mı?	X	
-Cooling check with 6 bars/ Kalıpla 6 bar su kaçığı var mı?	X	

Explanations:

Reviewer/ Değerlendirici:

No	PROBLEMS		ACTIONS		T0	T1	T2	T3	T4	T5	T6	T7	T8
	Picture	Explanation	Action	Resp.									
1		Nozzle valves pins adjustment	We will check Valve gate pins step and burrs	OPTM	X	OK							
2		Lifter not aligned. Hairs due to the not correct lifter position	We will correct lifter position	OPTM	X	OK							
3		Not good fitting in central injection area (risk of material leak)	We will replacement both inserts from HRS	OPTM	X	OK							
4		here are AIR Trap and gas on handle area	Venting channels from ejectors and stamping holes for gas	OPTM	X	OK							
5		Tool Labels missings	We will prepared tool labels	OPTM	X	OK							
6		Tool parkings legs not ready	We will prepare legs	OPTM	X	OK							
7													

Sayfa 1

Sayfa 1

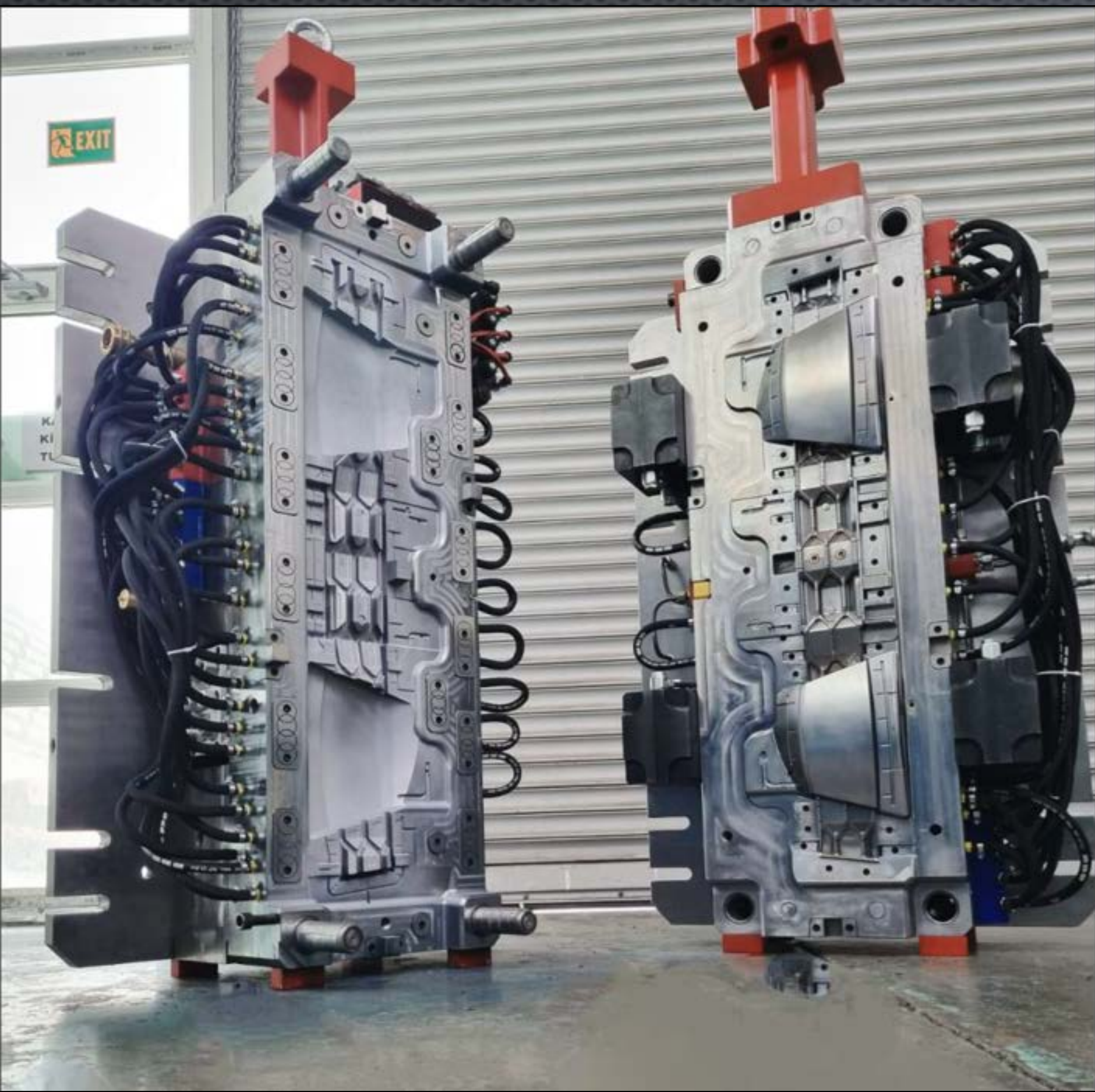
ENJEKSİYONLAMA HATALARININ GİDERİLMESİ	MAKİNA KUSURLARI							PARÇA KUSURLARI																							
	Fazla çapak	Daha büyük parça	Parça tuttur parça yapıyor	Eksik baskı	Yolukta tutma	Daha küçük parça	Siyah çizgiler	Renkli çizgiler	Kabarık oluyor	Kırılganlık, gevreklik	yanma izleri	Çatlak	Laminasyon kat kat olma	Renk bozuklukları	parçada lekeler	Akış izleri	Püskürme jelling	Yüzeyin zayıf tamamlanması	Görünür birleşme izi	Gürültüleme	ipeksi çizgiler	Çökme	Plastik içinde boşluklar	Çarpılma	Yüzey pütürlü	portakal yüzey	Parıltık				
Ütölleme basıncı	5-dn																														
Enjek. İlerleme zamanı		2-dn	3-dn		3-dn	3-up																									
Kapama kuvveti	3-up	8-up																													
Silindir sıcaklığı	2-dn	5-dn	6-dn			6-up						2-up																2-up	2-up		
Tutma basıncı		4-dn	2-dn			4-up																	3-up	3-up			3-up				
Tutma zamanı	4-dn		7-dn	9-up	2-dn	5-up																				3-up	4-up				
Enjeksiyon basıncı	1-dn	3-dn	1-dn	2-up	1-dn	2-up						4-dn	5-dn	5-dn			4-up	2-up	1-up	2-up	2-up	2-up	2-up	2-up	4-u/d	1-up	1-up				
Enjeksiyon hızı	6-dn	1-dn	8-dn	6-up	5-dn	1-up						1-dn	1-u/d	4-u/d	5-u/d	1-dn	4-up	5-up	4-dn	6-up	6-dn	6-up	6-dn	4-u/d	1-up	3-up					
Besleme büyüklüğü					1-up																	1-up	1-up								
Erime sıcaklığı				3-up	3-dn	4-dn	1-up	2-dn				2-up					2-up		2-up	5-dn	5-dn	5-dn									
Kalıp soğuma zamanı		6-up	4-up		4-dn	9-dn												8-up							2-up						
Kalıp sıcaklığı	7-dn	5-dn	5-up		7-dn		3-up	3-dn	4-up	1-up		2-up	3-up							5-dn					1-u/d	4-up					
Nozzle sıcaklığı																															
Toplam çevrim																															
Vida hızı																															
Yolluk yerinin değişikliği																															
Yolluk giriş büyüklüğü																															
Sprue/runner büyüklüğü																															
Gaz kanalı ölçüleri	10-u/d																														
Hammadda kirlenmesi																															
Aalıştırma	9																														
Dişi çeliğin temizlenmesi																															
Kalıbın temizlenmesi	8																														
Gaz kanallarının temizlenmesi																															
Hammaddenin kurutulması																															
Aalıştırma kalitesi																															



# MOLD SAMPLES

## FORD TRUCK FRAME

## FIAT EGEA FUSEBOX COVER



TOOL DIMENSIONS: 1700x800x800 mm

TOOL DIMENSIONS: 1.000x850x650 mm



# MOLD SAMPLES

## TOGG TRİM BEZEL



TOOL DIMENSIONS: 1600x800x900mm

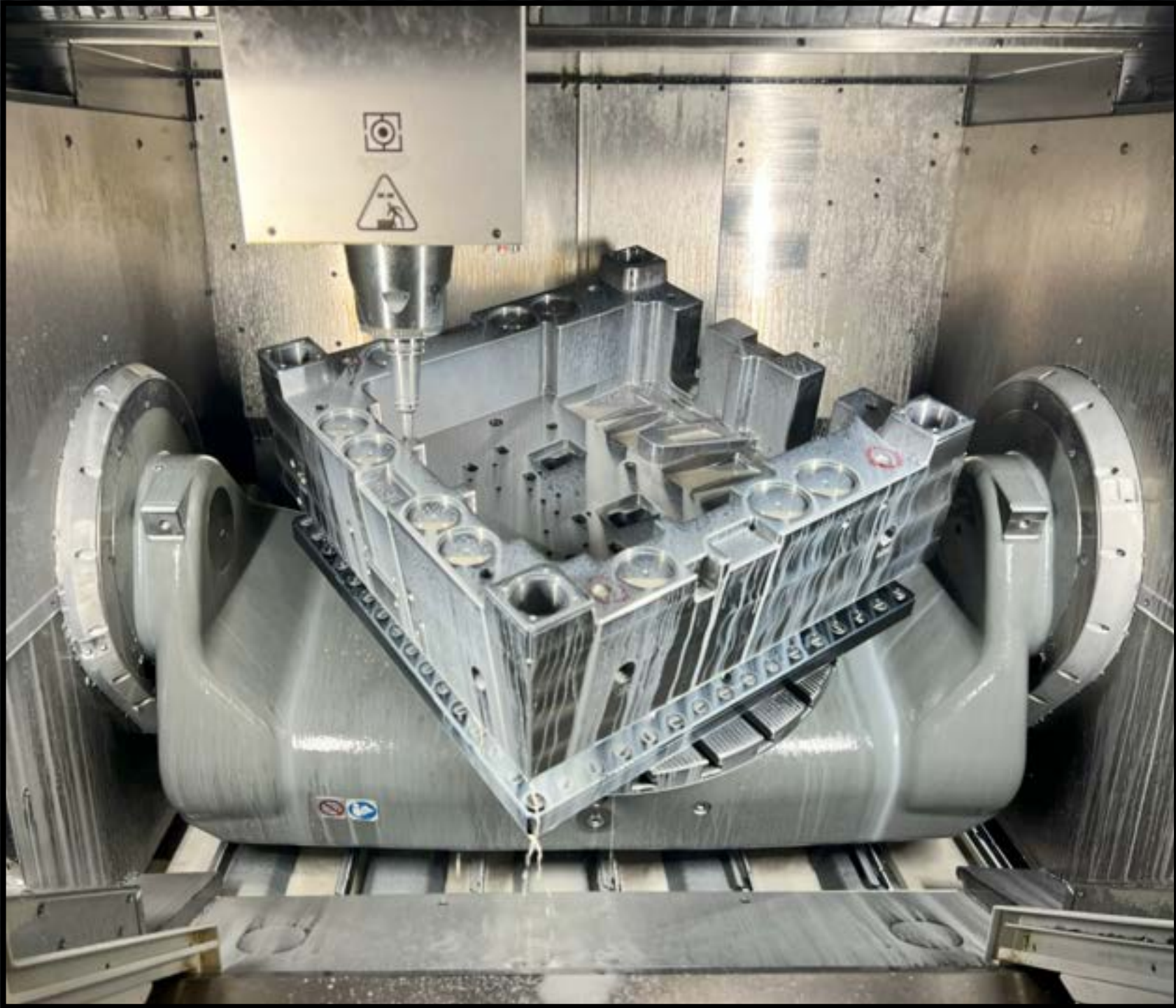
## IML KOVA



TOOL DIMENSIONS: 900x900x950mm

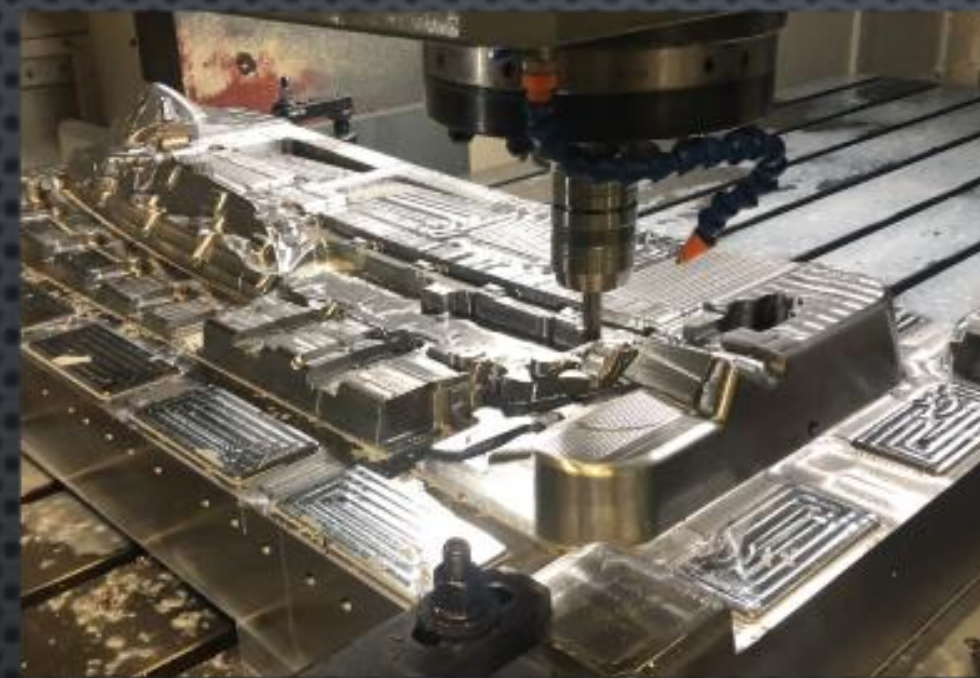
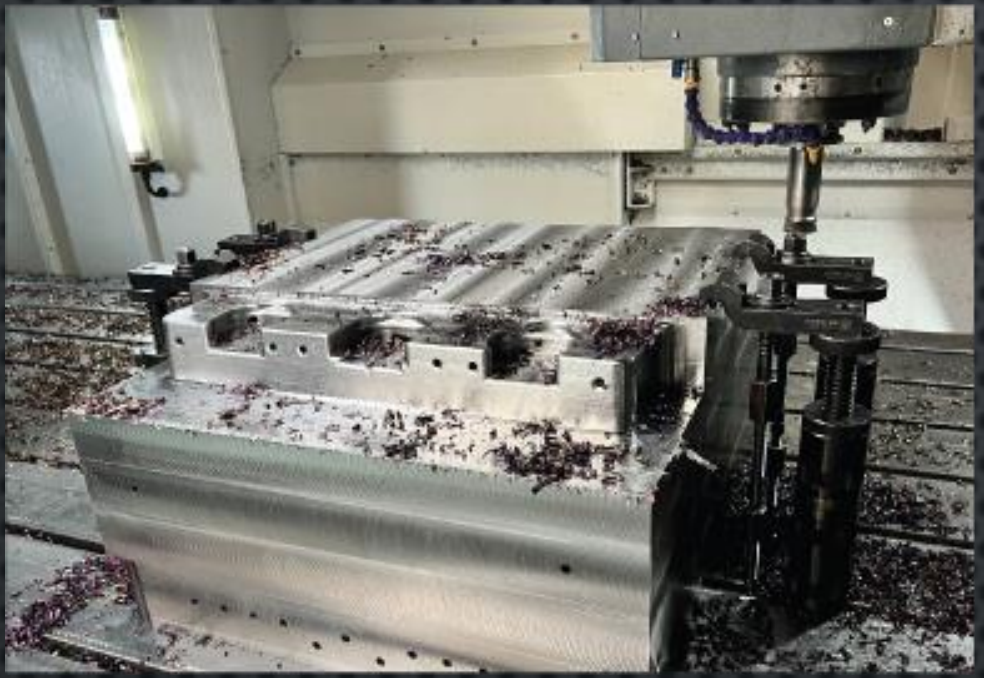
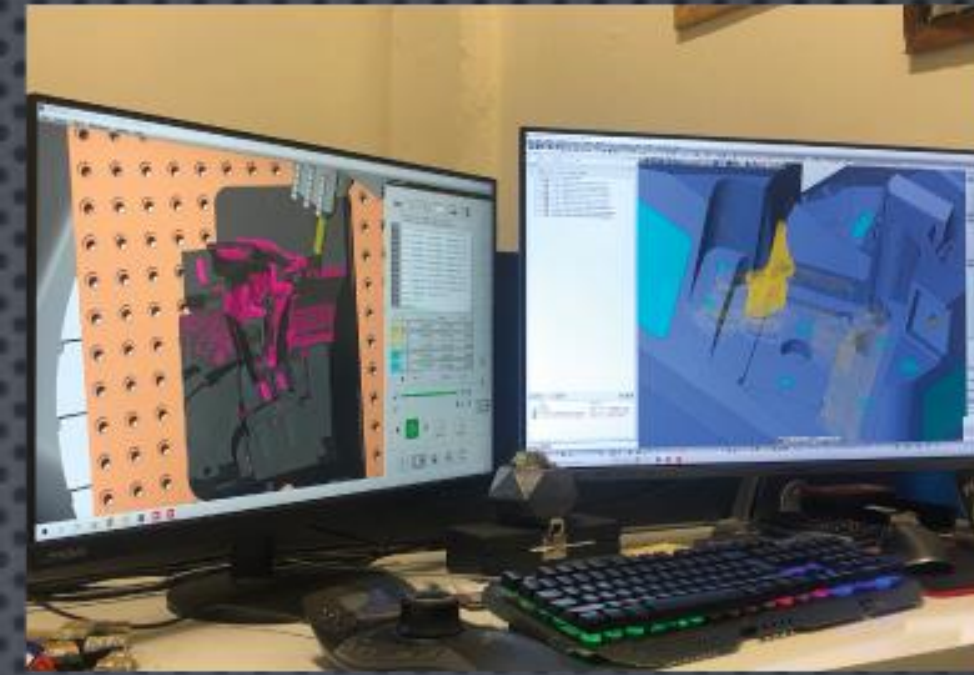


# CNC MILLING ABILITY



# CNC MILLING ABILITY





# MAIN SUPPLIERS

## Steel Suppliers:



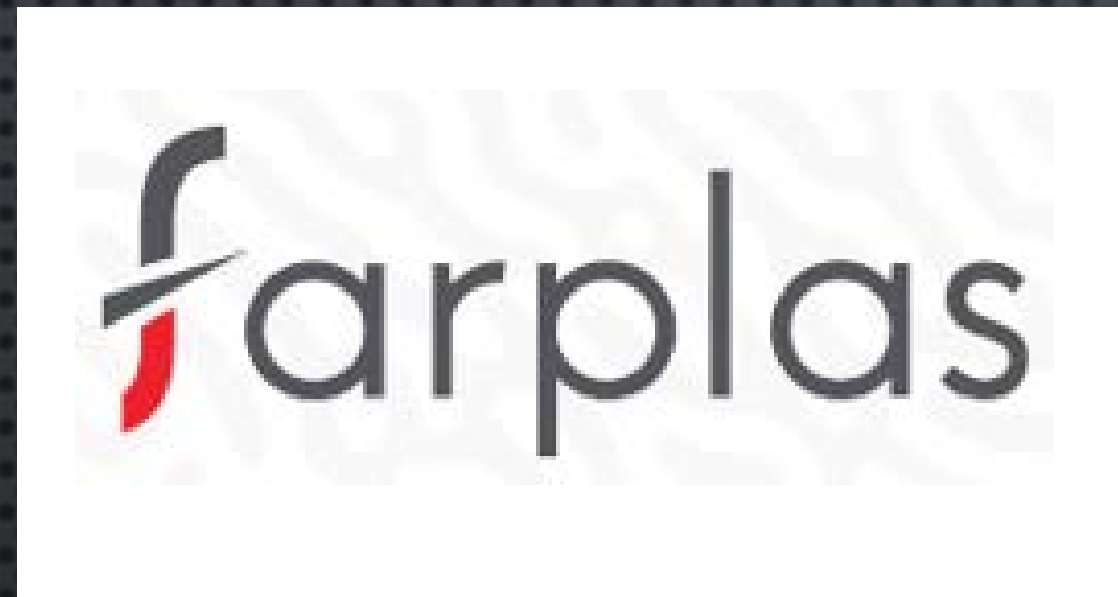
## Hot Runner Suppliers:



## Standart Component Suppliers:



# AUTOMOTIVE REFERENCES



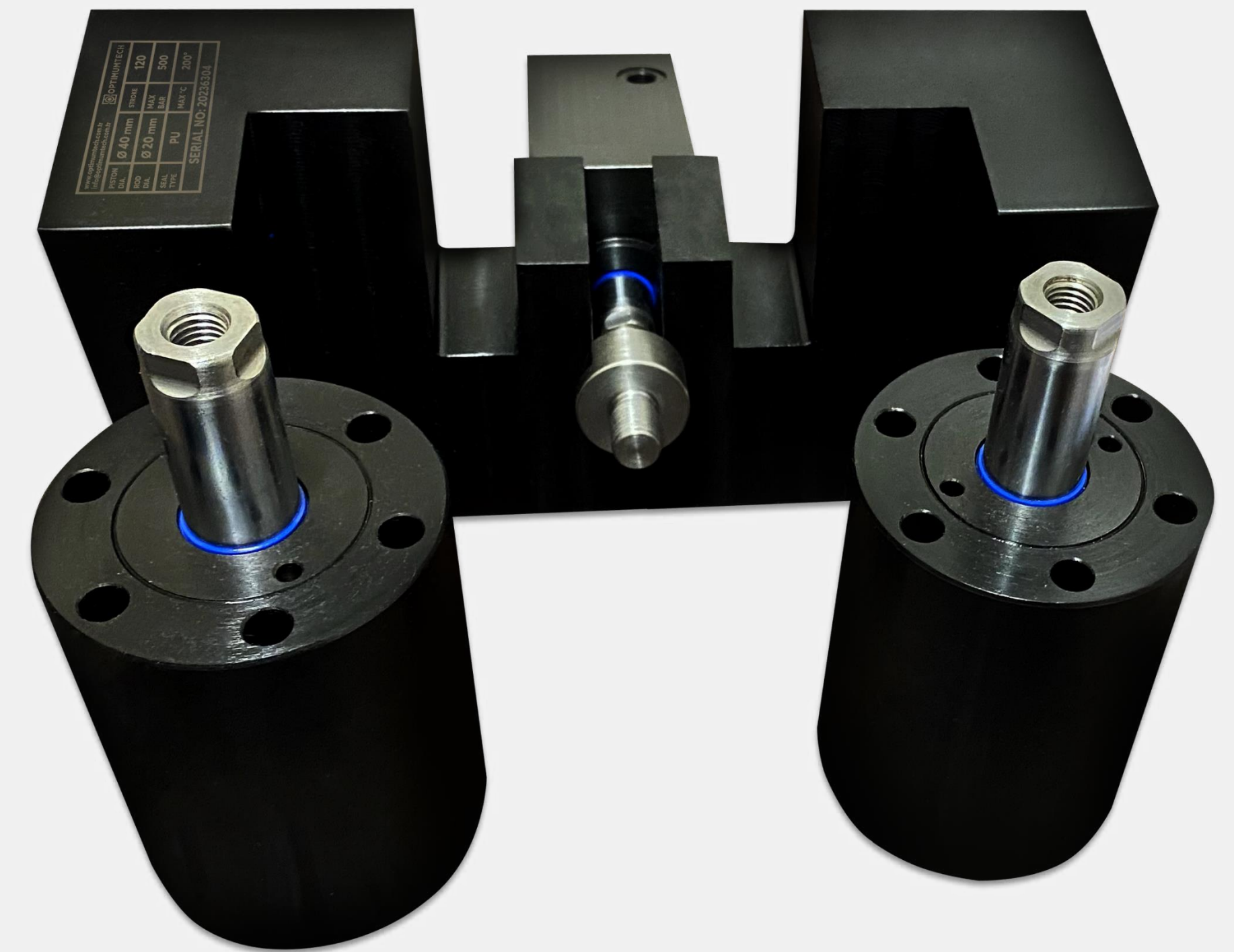


# HYDRAULIC CYLINDERS PRODUCTION

Our cylinders, which we continue to produce using the highest quality materials and sealing components, are capable of withstanding up to 500 bars of pressure.

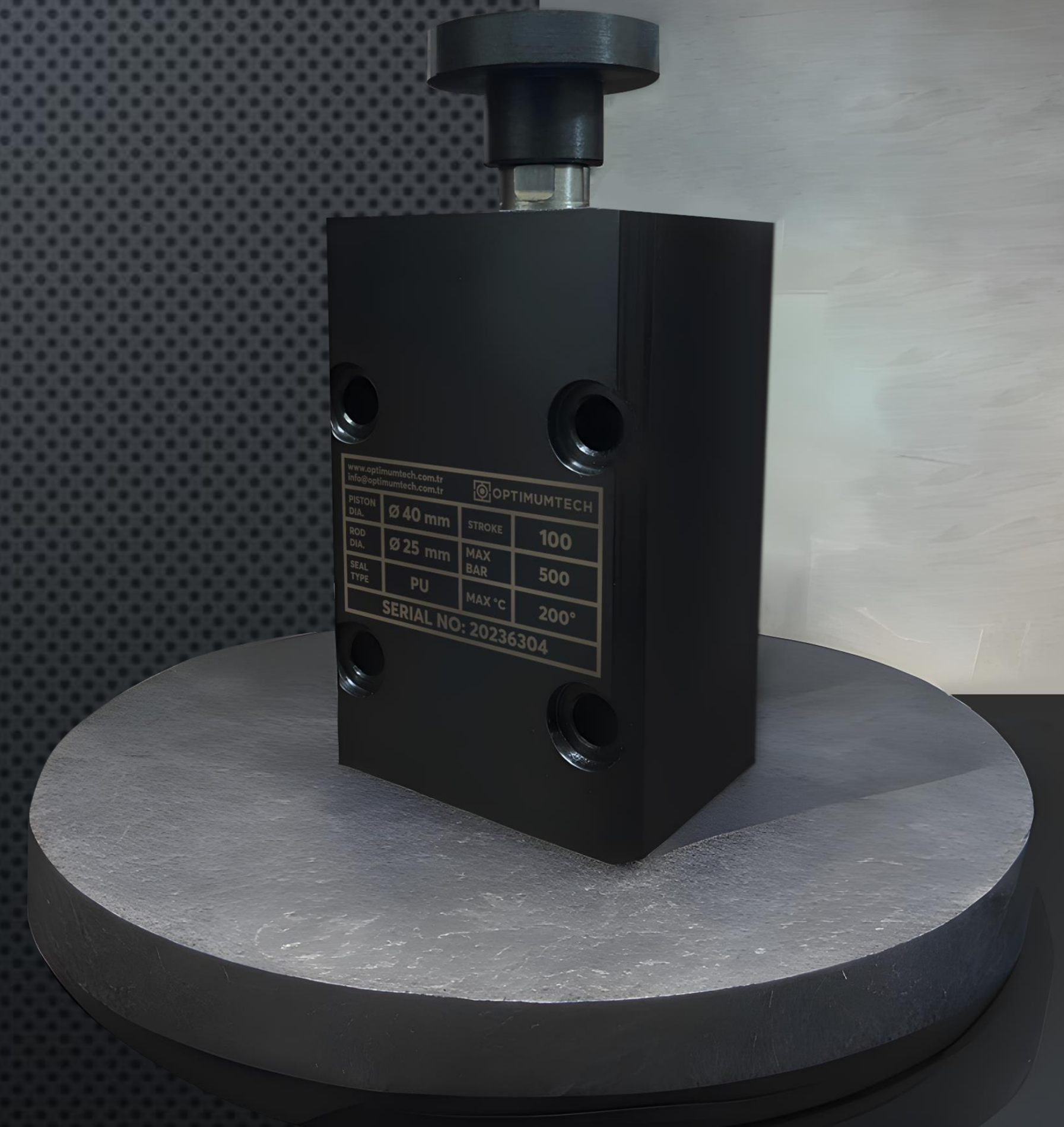
Since 2011, we've produced approximately +20.000 cylinders.

We have always been committed to resolving any problem, no matter how small, that our customers may experience, and we will continue to do that. We have such confidence in our products that we have no hesitation in offering a lifetime maintenance and repair warranty.

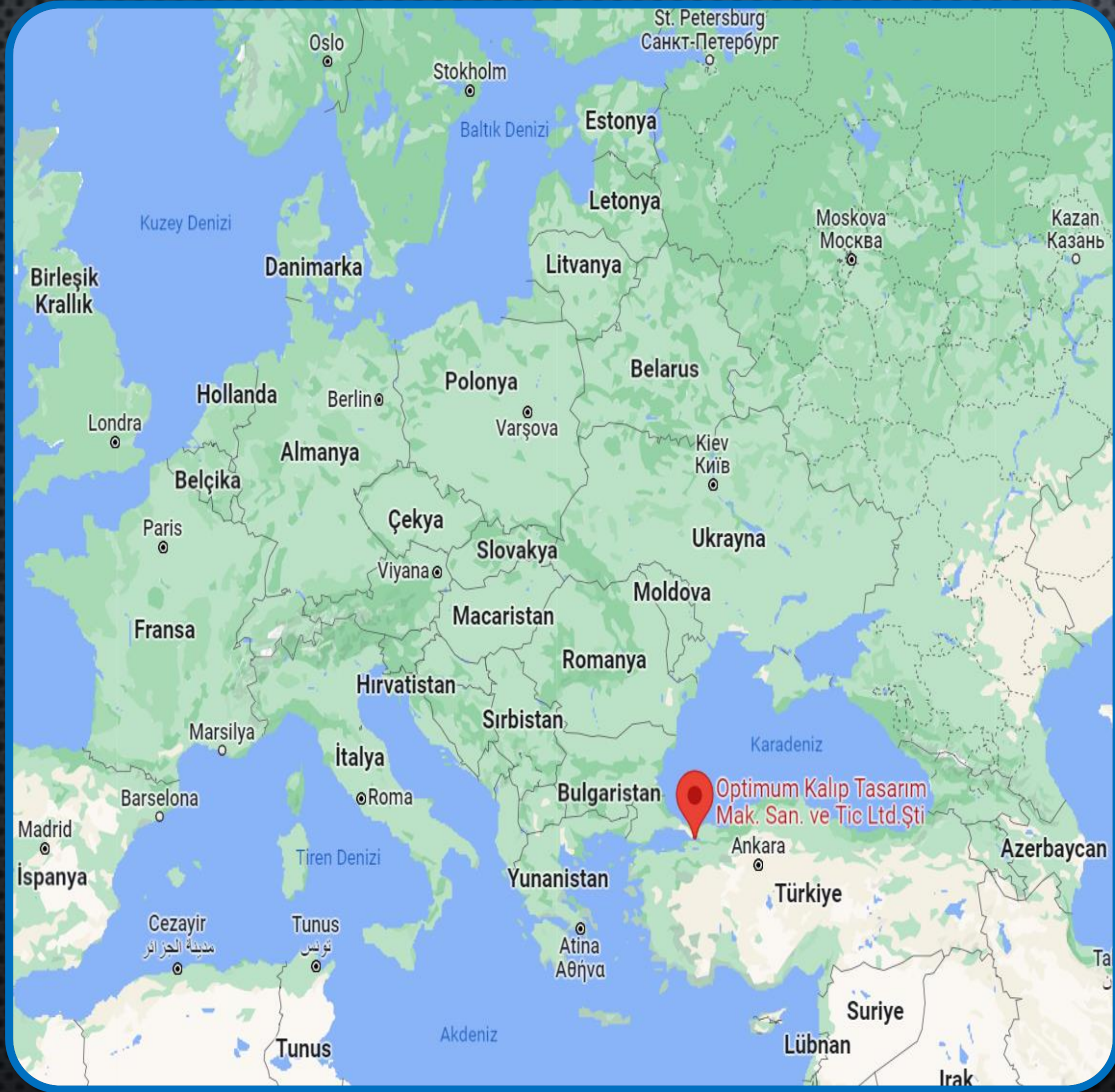


# HYDRAULIC CYLINDERS PRODUCTION

- Unlimited part stock.
- Mirror-shine surface quality.
- Durable and long-lasting products.
- Easy order with e-catalogue system.
- Hardened working surface of the piston.
- Maximum operating pressure of 500 bar.
- Ordering options with custom dimensions.
- Standard products have 200°C temperature resistance.
- Delivery within 2-5 business days to all regions of Turkey.



# CONTACTS



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[www.optimummold.com.tr](http://www.optimummold.com.tr)

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