2023 COMPANY PROFILE

We deliver what the customers focusing on

ABOUT US

Nature Of Business: CORP
Start of business: 1998
DUNS Number:663863497
Occupied Area: 4600sqm
Capability: 200-260 molds/year

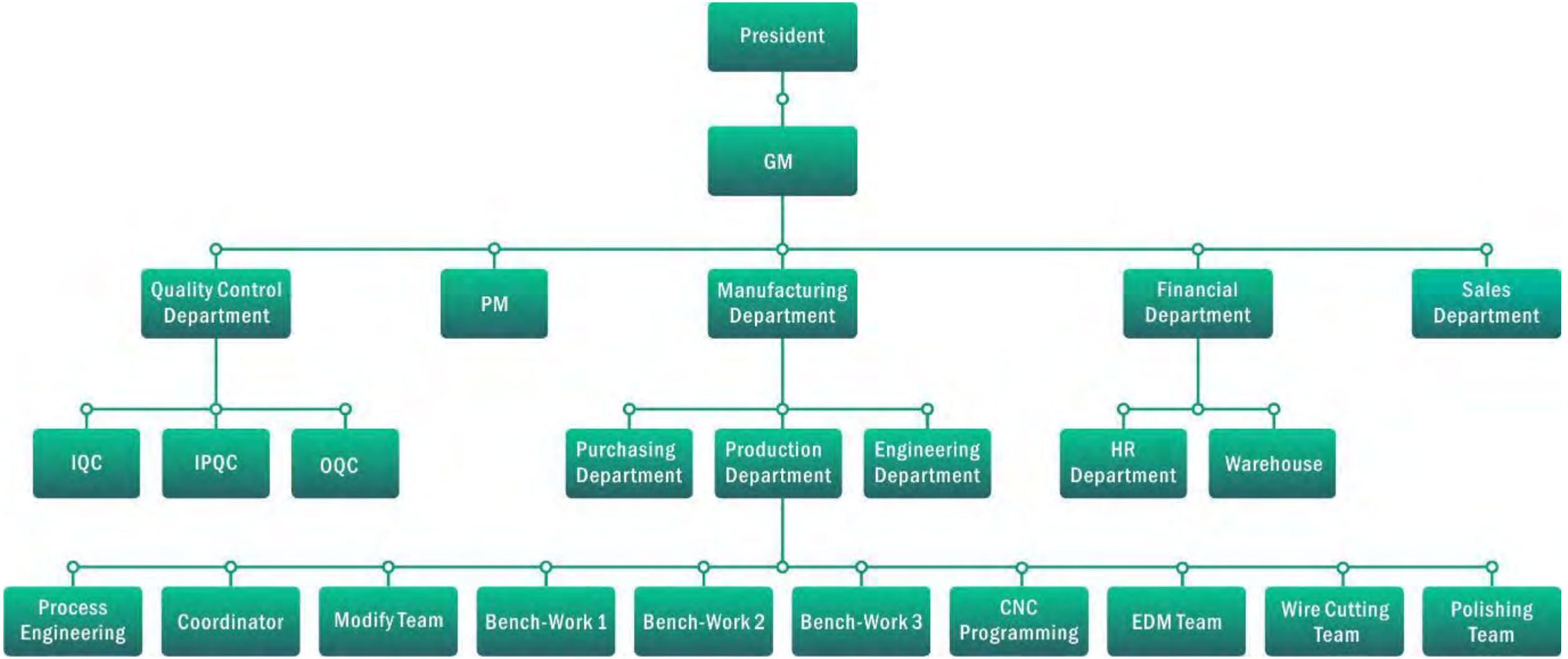
OUR TEAM

All project Managers are with 15+ years of experiences

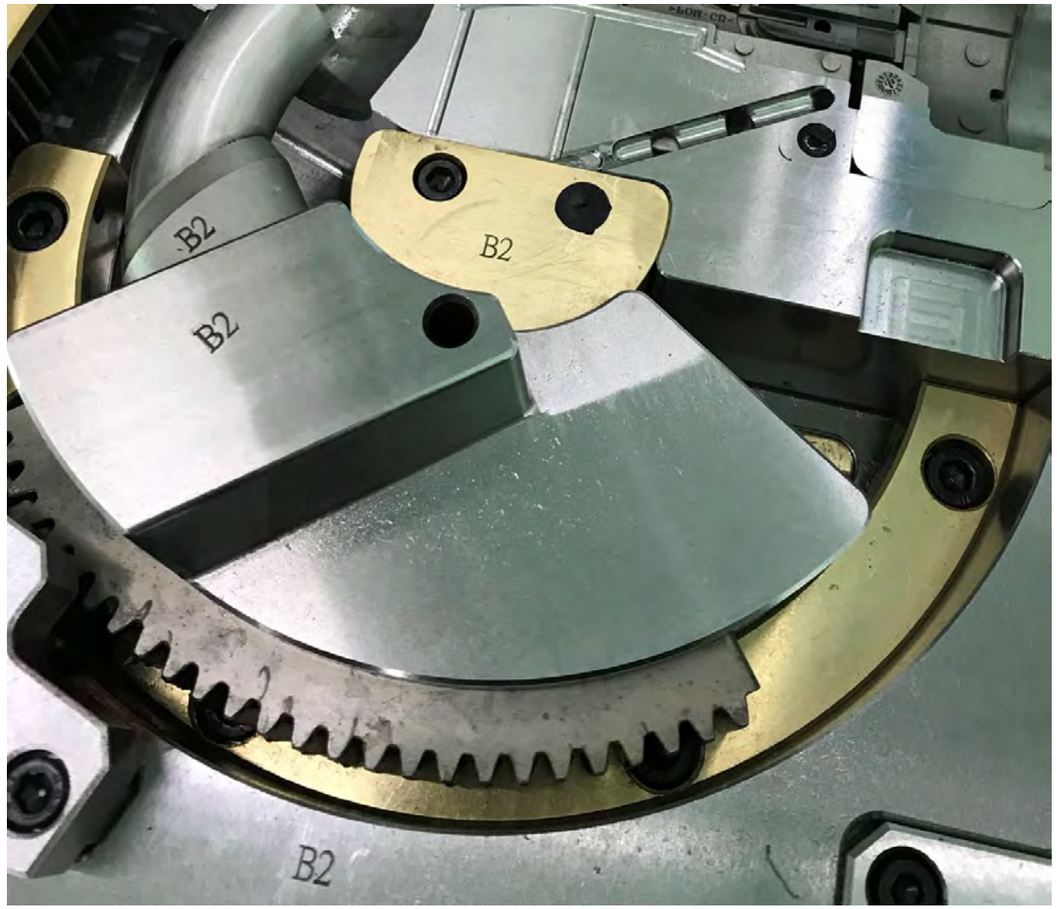
Employees: 120
Design Engineers: 16
Project Engineers: 12
Quoting Engineers: 3
Sales: 8

2023

ORGANIZATION CHART



MANUFACTURING

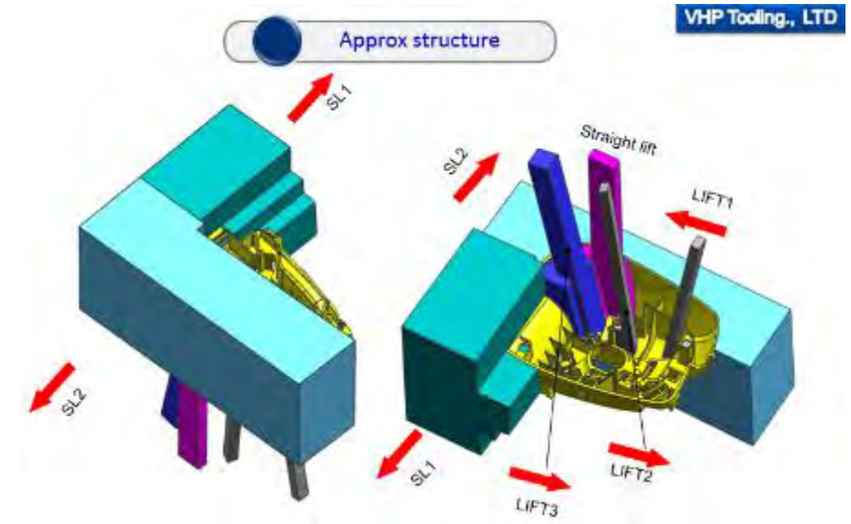


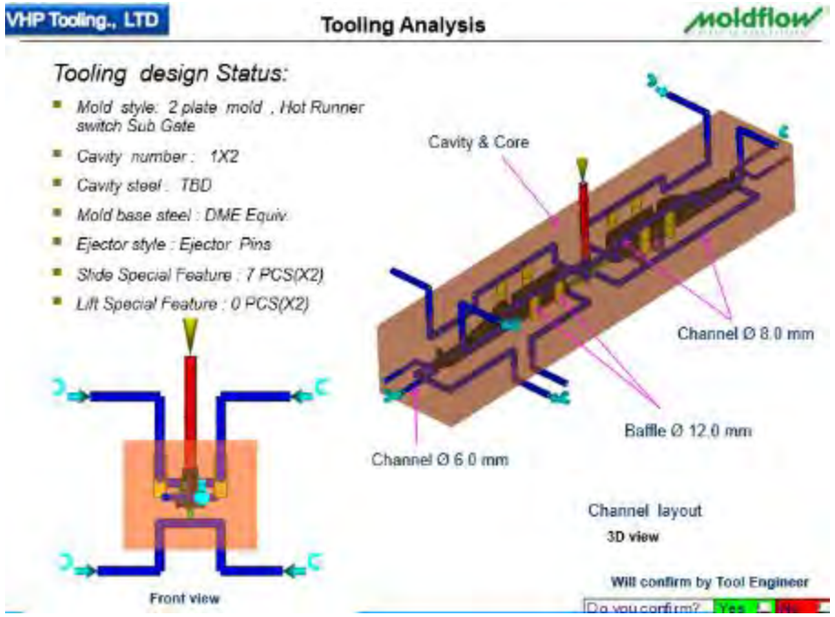
Mold Tolerance Accuracy: ±*0.005mm*
Product Tolerance Accuracy: ±*0.01mm*
Max injection machine size: *2000 Ton*
Max Mold Size: *1800*1600*1200*mm*

MOLD CAPABILITIES

HIGH PRCISION MULTI-CAVITY MOLD
LARGE & COMPLEX MOLD (up to 20T)

2K MOLD/OVER-MOLD
STACK MOLD
BMC-SMC MOLD
GAS- ASSISTED MOLD
In Mold Decoration

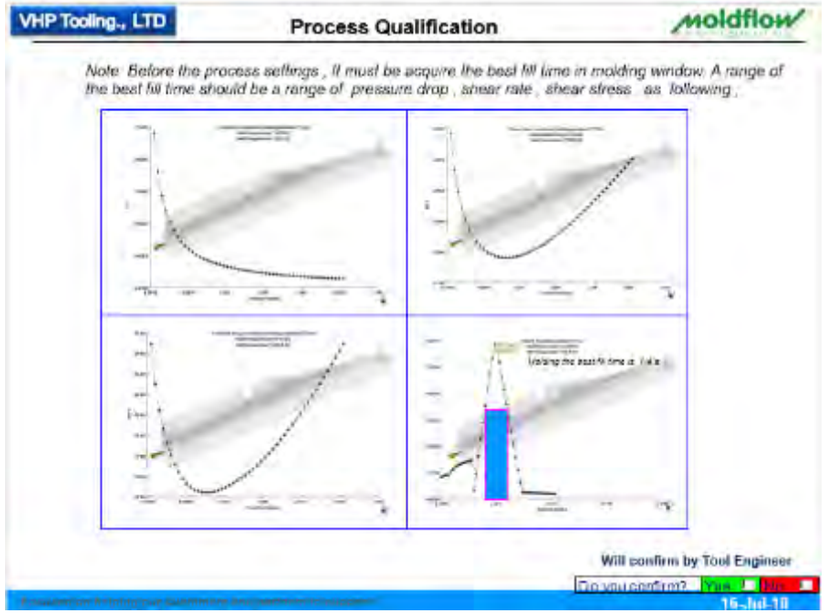




MOLD STANDARD

DME
HASCO

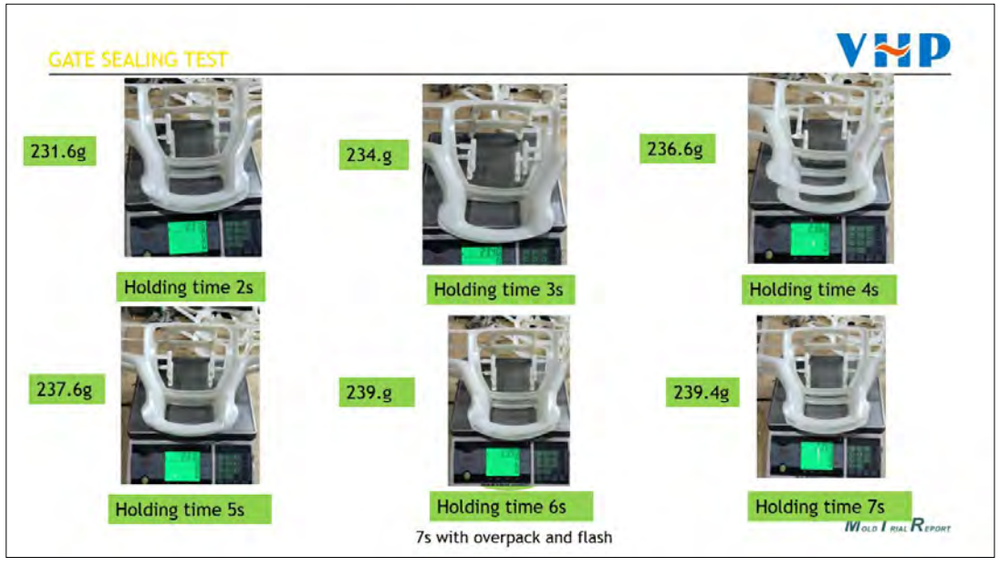
Feasibility Study (DFM)
Economic Evaluation
Mold Flow Analysis
Full 2D/3D Design



TESTING & MOLDING

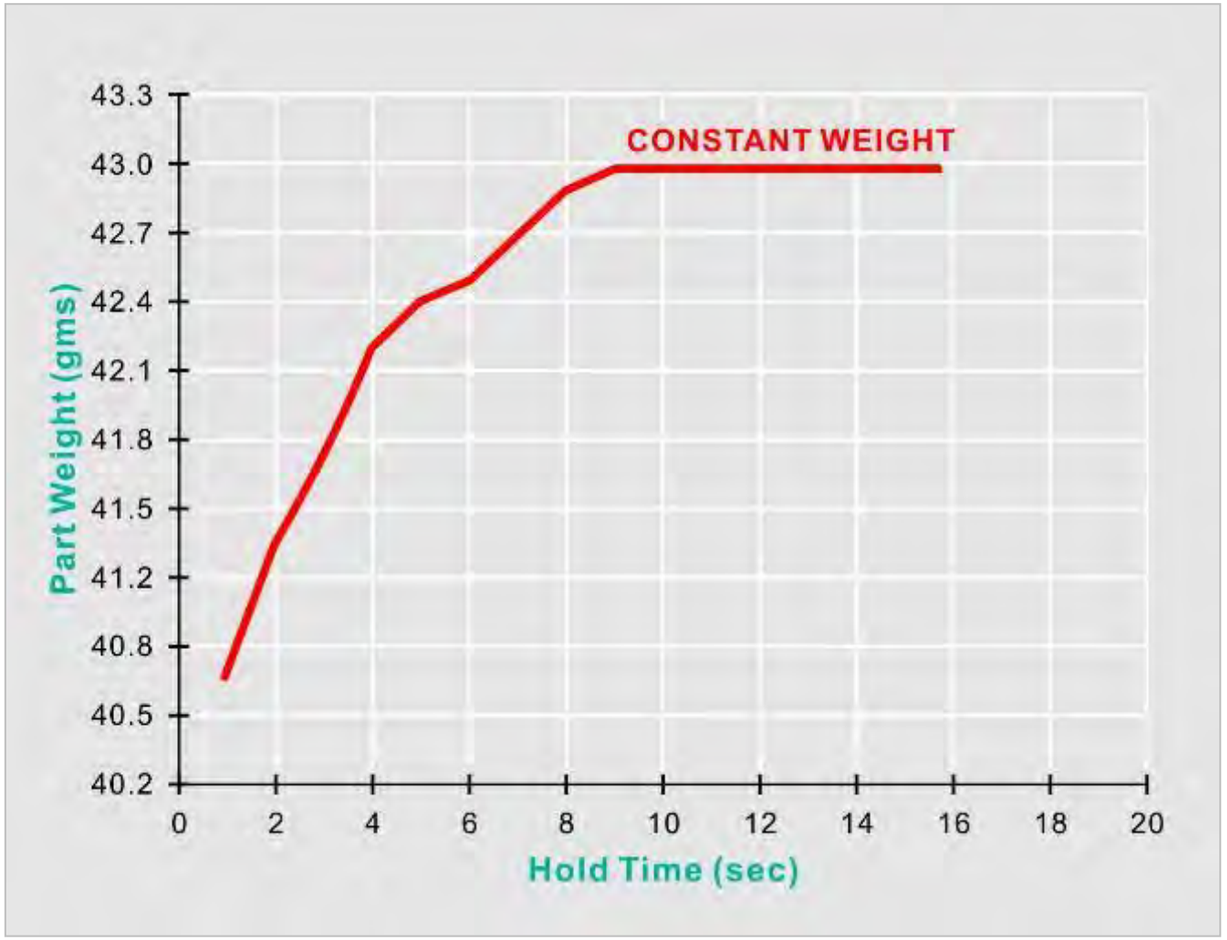
VHP Tooling has got deep understanding and extensive experiences in a wide variety of injection molding technologies and production methods to assist customers in transforming innovative ideas into real products. To ensure process stability and product quality.

We are in strict accordance with ISO9001: 2015 quality control procedures to ensure the products meet customers' requirements.



GATE SEAL STUDY

A very simple study is performed to determine this time. Samples molded with different holding times are weighed and the time after which the weight remains constant is set as the holding time. As the holding time is increased more and more plastic enters the cavity increasing the weight. But as soon as the gate is frozen, the plastic cannot get into the cavity and the part weight remains constant. This is called the gate freeze time or the gate seal time. See the picture on the next page.



VISCOSITY CURVE CALCULATION

Date:	03/14/18	Location		XXXX XXX	Intensification Ratio (Ri)		13.19
Tool #:		XXXXX	Press Size	380T	Stroke, include decompression (inches or mm)		51.00
Material:		XXXXXX			1st-2nd stage position transfer (inches or mm)		20.50
Part:	XXXX_XXXX				Stroke travel distance (inches or mm)		30.50
	Mach. Set	Fill Time	Hydraulic Press.	Inten.	Plastic	Relative	Shear	Mach.
	Velocity	Ft	At Transfer (Ht)	Ratio	Pressure psi	Viscosity	Rate	Actual Vel.
Shot #	in-mm/sec	seconds	psi	Ri	Ht x Ri	Ht x Ri x Ft	1/Ft	in-mm/sec
1	5.00 / 90%	0.56	1,320	13.19	17,411	9,750	1.79	54.46
2	4.50 / 80%	0.57	1,320	13.19	17,411	9,924	1.75	53.51
3	4.00 / 70%	0.59	1,300	13.19	17,147	10,117	1.69	51.69
4	3.50 / 60%	0.62	1,300	13.19	17,147	10,631	1.61	49.19
5	3.00 / 50%	0.68	1,250	13.19	16,488	11,212	1.47	44.85
6	2.50 / 40%	0.84	1,200	13.19	15,828	13,296	1.19	36.31
7	2.00 / 35%	1.15	1,000	13.19	13,190	15,169	0.87	26.52
8	1.50 / 30%	1.40	900	13.19	11,871	16,619	0.71	21.79
9	1.00 / 25%	1.87	800	13.19	10,552	19,732	0.53	16.31
10	0.75 / 20%	2.71	700	13.19	9,233	25,021	0.37	11.25
11	0.50 / 15%	4.11	680	13.19	8,969	36,863	0.24	7.42
12	0.25 / 10%	8.02	800	13.19	10,552	84,627	0.12	3.80

Viscosity Curve Calculation

How to define the viscosity curve of injection molding?

1) Set the melt temperature in middle of range as described by manufacturing.

2) Set all the holding phase parameter to zero. This means only injection no holding.

3) Set the Injection pressure to maximum to available.

4) Set the cooling time sufficient to ejection.

5) Set injection speed slow, and make sure component should be short only 50% filled, if not adjust the material position.

CAVITY BALANCE

Cavity No.	Transfer Position Weight (Must be 90%-95%)	Gate Seal Weight	Direction	Percentage	Percent Difference
ROR3	3.35	3.57		93.8%	7.5%
ROR5	2.86	3.00		95.3%	
ROR4	2.43	2.62		92.7%	
ROR2	2.47	2.69		91.8%	
ROR1	3.09	3.32		93.1%	
LOR2	4.98	5.07		98.2%	
LOR4	3.44	3.78		91.0%	
LOR3	3.32	3.60		92.2%	
LOR1	3.23	3.56		90.7%	
LOR5	3.55	3.80		90.7%	

Good cavity and runner design is crucial in order to achieve a balanced fill where all cavities fill at the same time with the same shear rate. If some fill prior to others, pack and hold will not have the same influence on all cavities and dimensions will be different. If this is the case, band-aids will need to be applied to the process in order to achieve the level of quality required. This can be done by trying to manipulate the injection speeds, over packing most cavities as well as many other adjustments. This will result in a very small process window that will not encompass all the normal variations that are expected. Needless to say, the process will never be optimized or as profitable as it could have been.

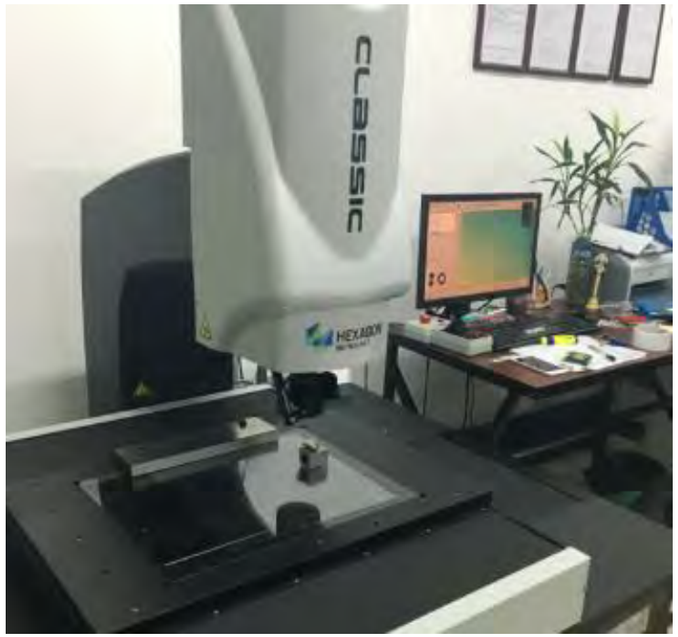
PRESSURE LOSS

Pressure Loss Data	Intensification Ratio	14.70	Units
	System Hydraulic Pressure	2,400	psi
Fill in Yellow Cells	HYDRAULIC Presure	Plastic Pressure	
Total Pressure Needed to Fill Part 99% Full	2,040	29,988	psi
Pressure to Purge Shot Through Nozzle	165	2,426	psi
Fill in Yellow Cells	985	14,480	165
Fill in Yellow Cells	1,200	17,640	psi

Actual Pressure Loss For Each Flow Path		Max psi Drop Permissible
	Actual	
Nozzle	2,426	4,500
Sprue and Runner	12,054	6,000
Gate	3,161	5,000
Part	12,348	?
Presure Available to Part	5,292	

You can figure out where you lost pressure—and how to reduce this loss—by making short shots. In this scenario, the sprue and runner were responsible for too much pressure loss (see graph below). But simply opening up the runner to reduce pressure loss will lead to other issues. Best to do a mold flow analysis to find a compromise solution.

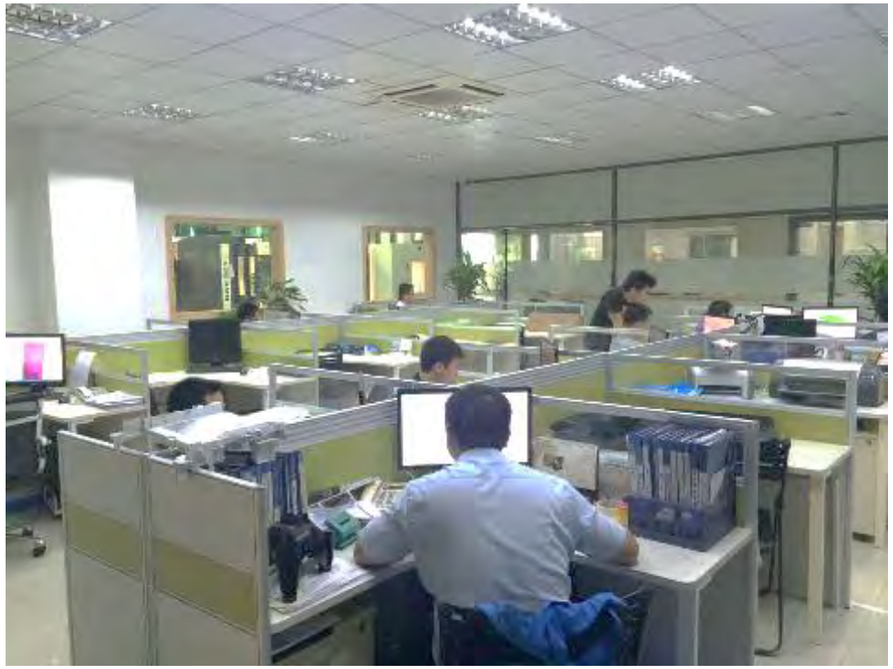
QUALITY CONTROL



Inspection Process:

1.Electrode Inspection
2. Mold Steel Inspection
3.Mold Assembly Check
4.FAI Report for product
5.CPK Report

OUR ENVIRONMENT



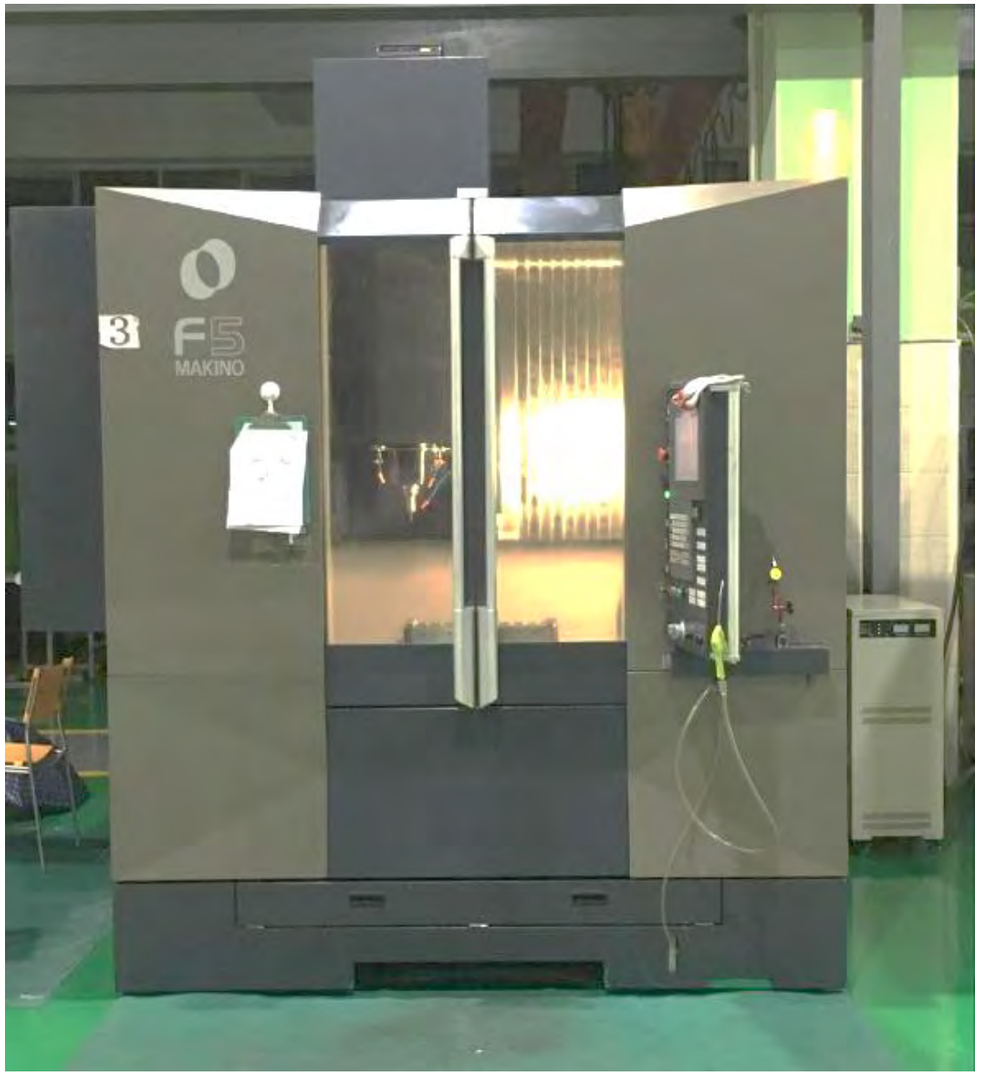
EQUIPMENTS

FANUC and YCM

high speed CNC

2023

EQUIPMENTS



MAKINO CNC

EQUIPMENTS

Makino and YCM high speed CNC

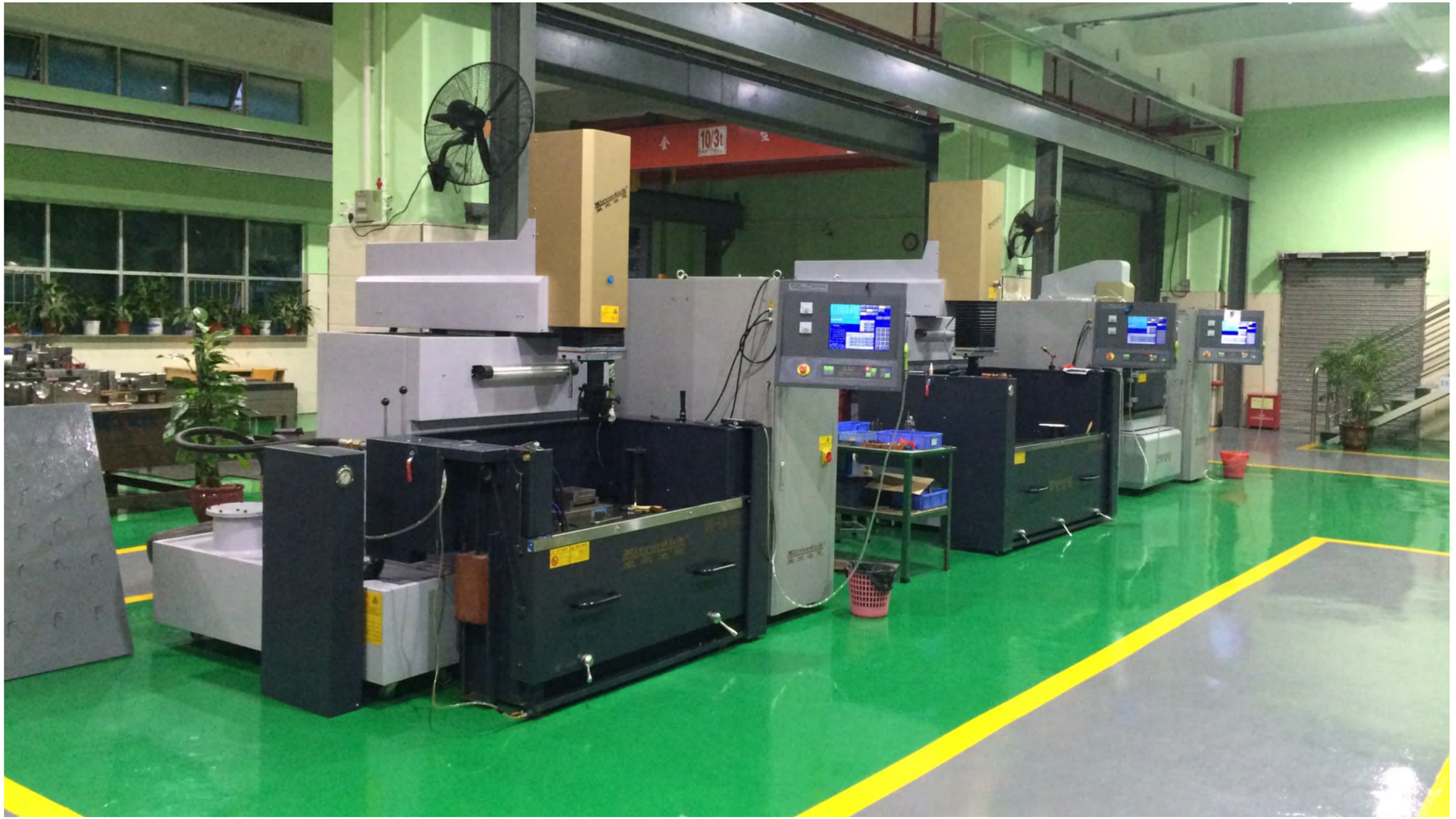
EQUIPMENTS

Sodick slow Wire-cut EDM

EQUIPMENTS

Makino Mirror EDM machine

EQUIPMENTS



Mirror EDM machines

EQUIPMENTS

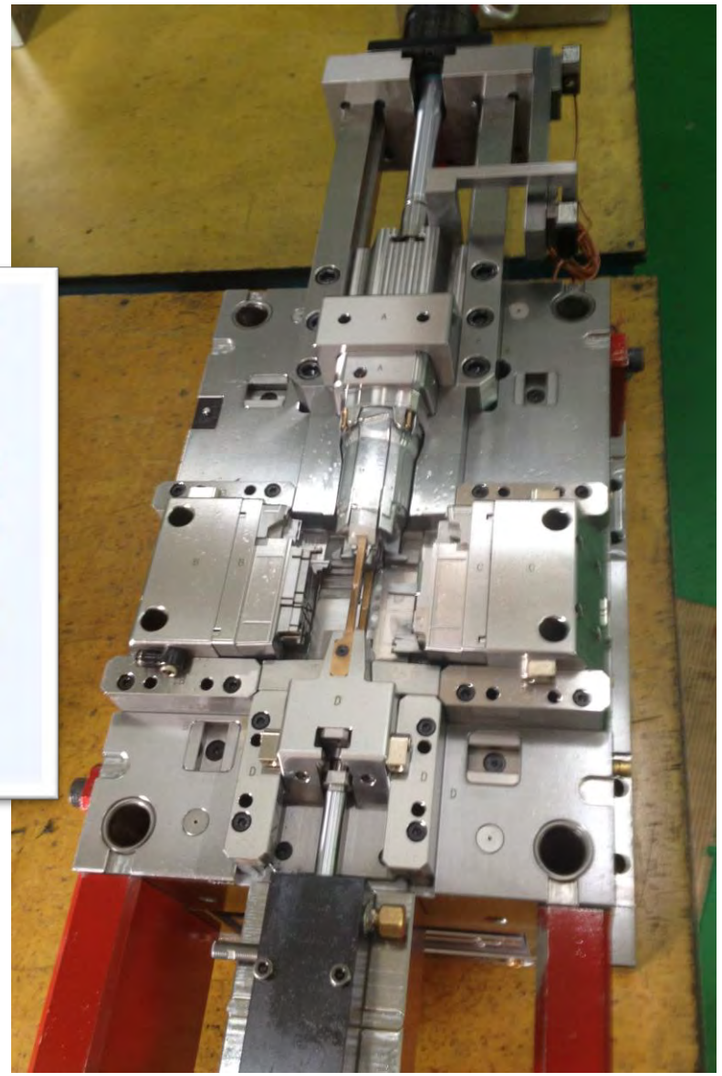
Precision grind machine

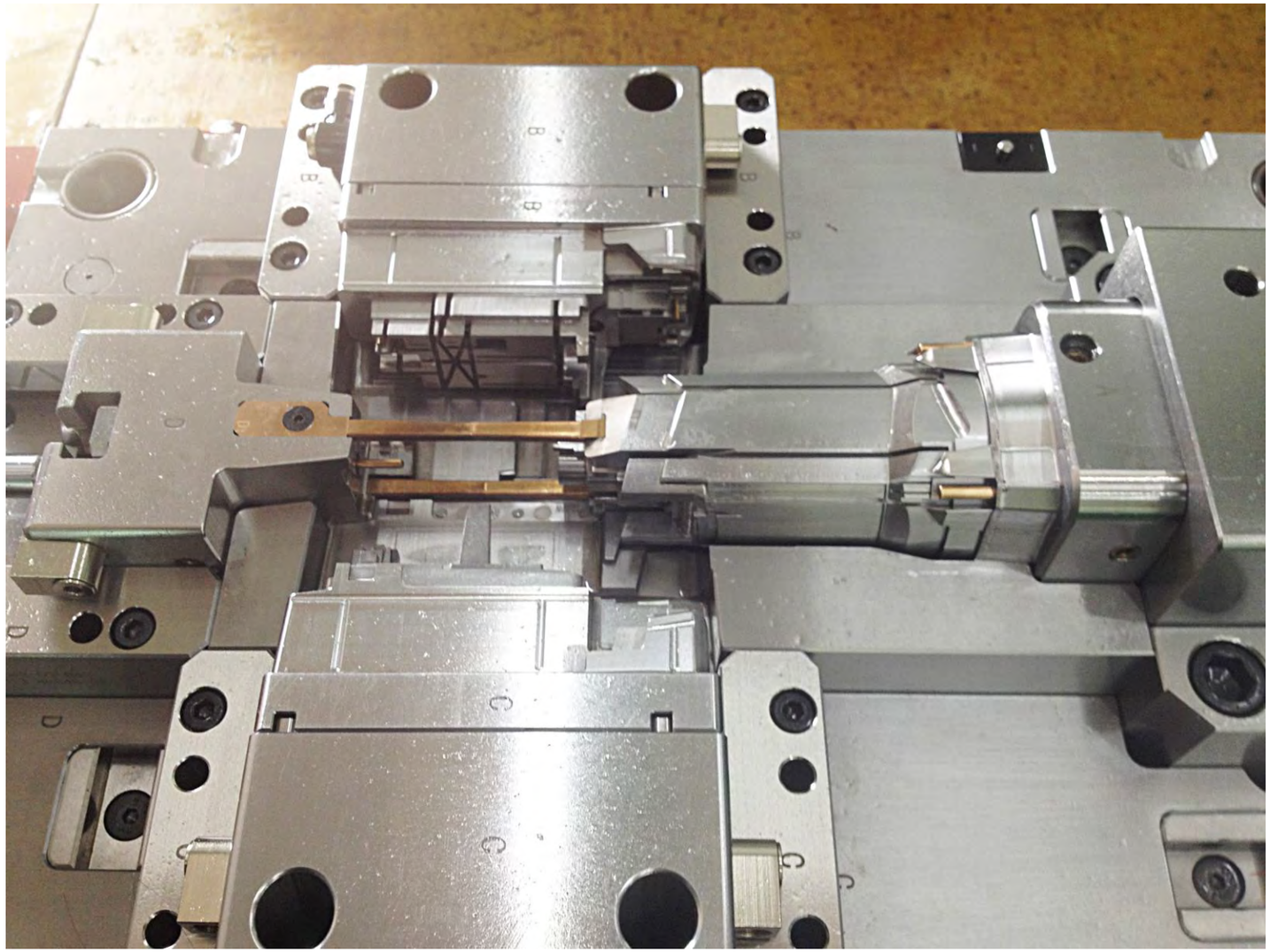
EQUIPMENTS

JAPAN NISSEI:
Mold trial 80-450 Ton

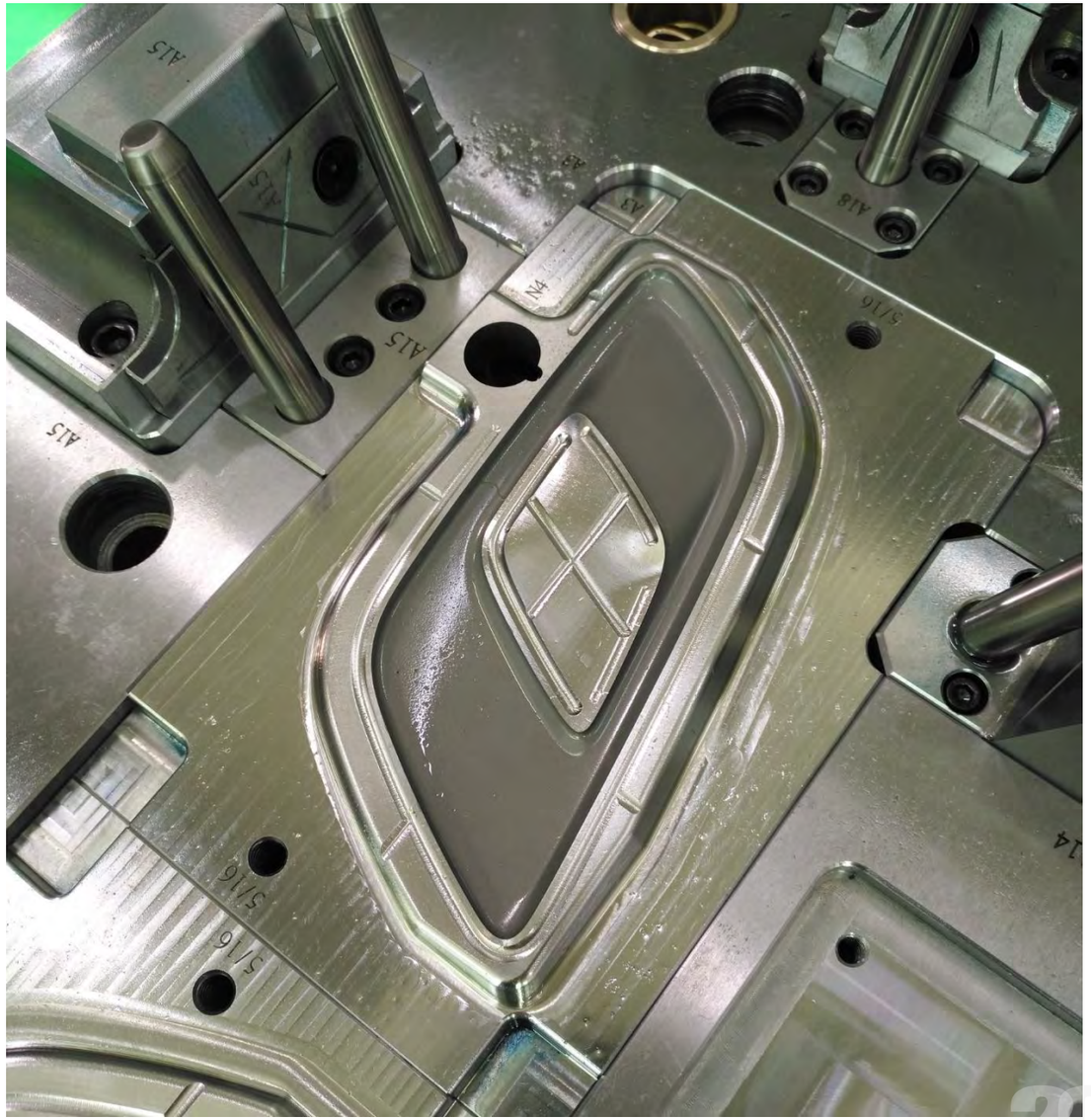
TOOLING

BOSCH HOUSING





TOOLING



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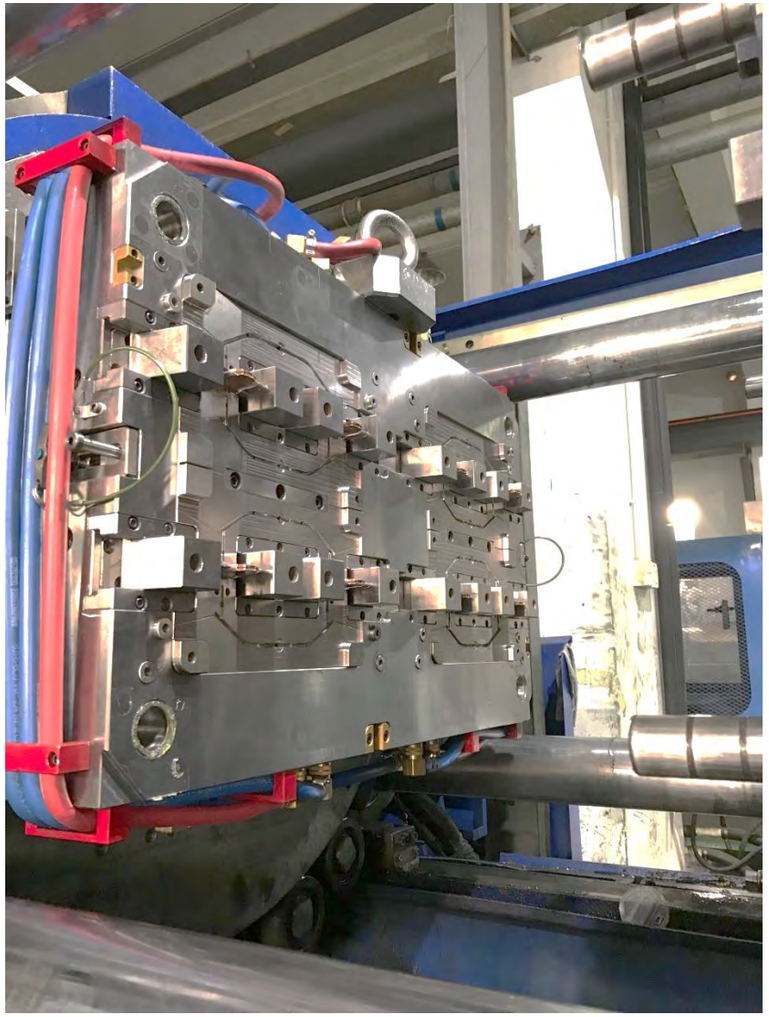
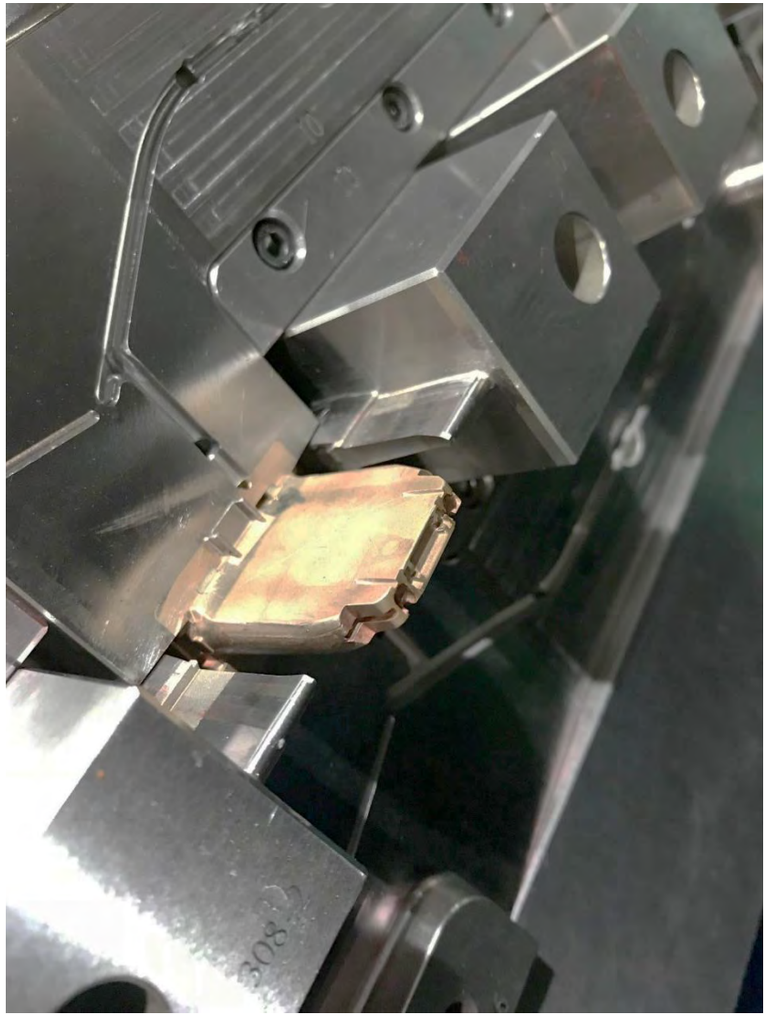
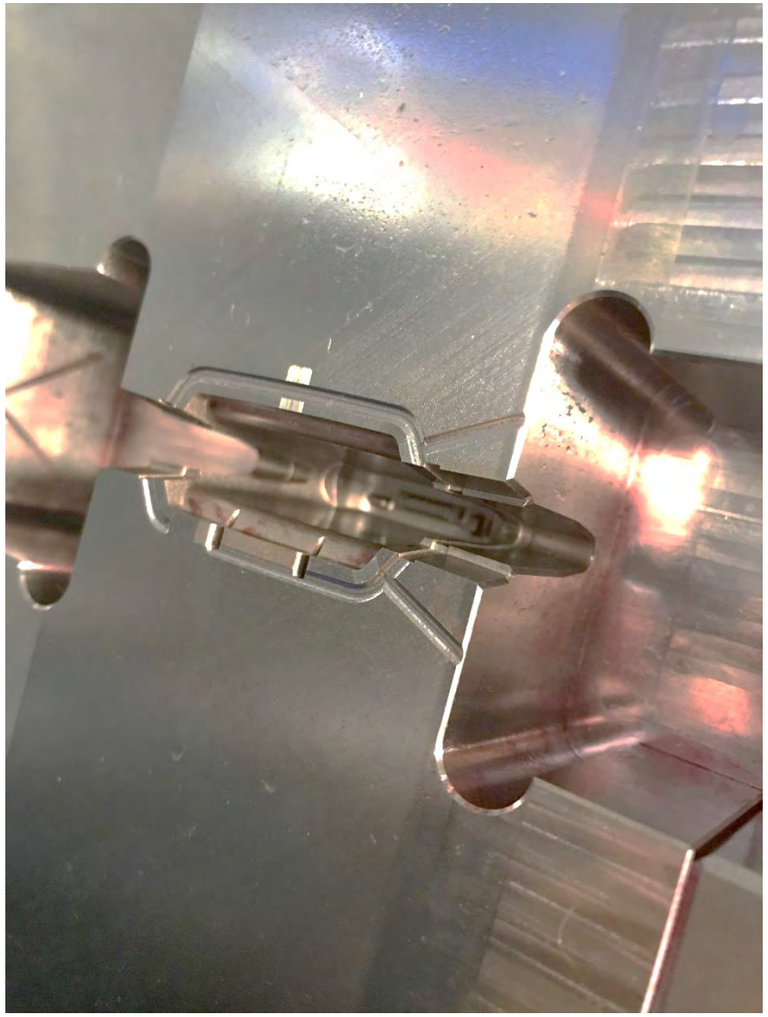
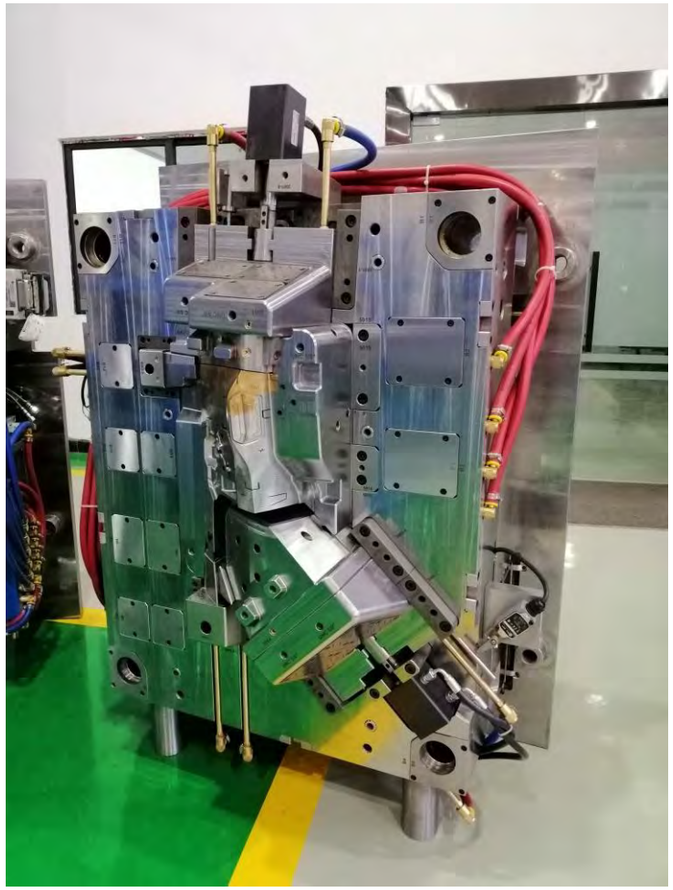




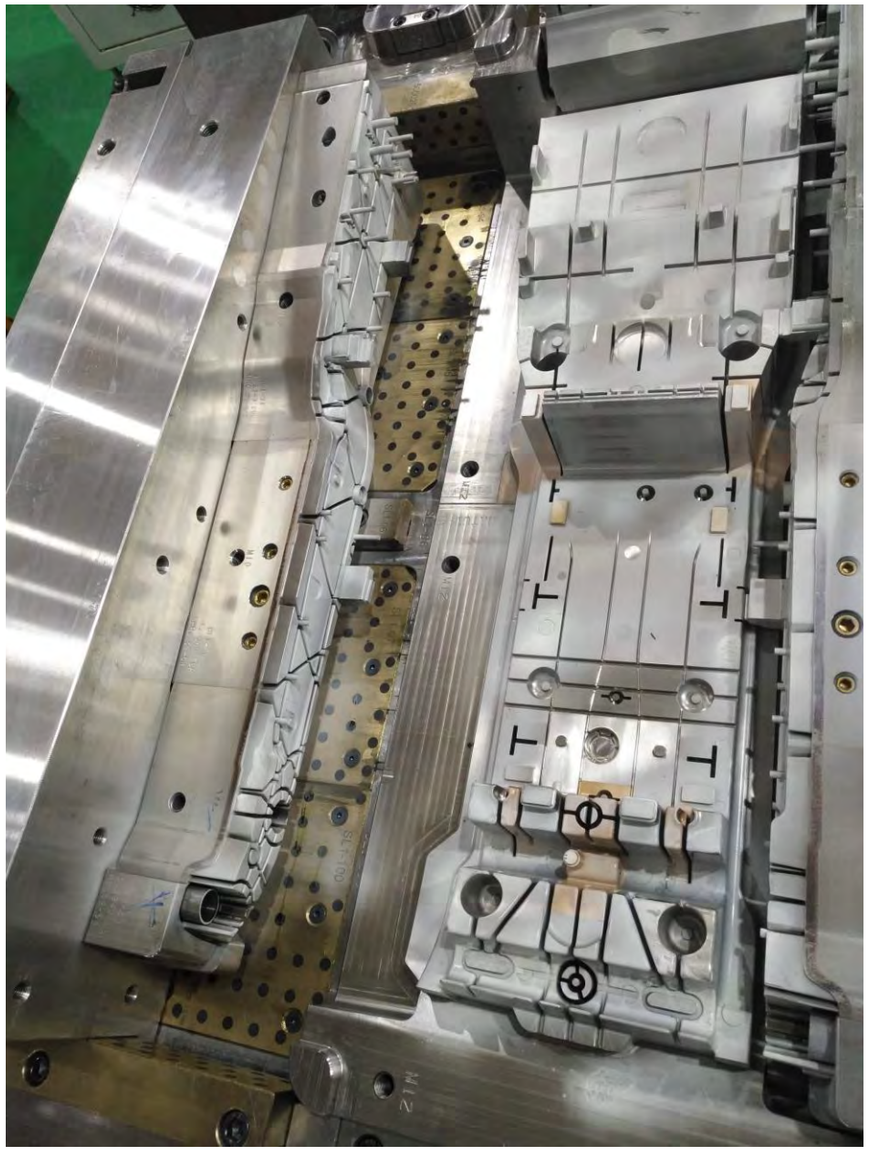


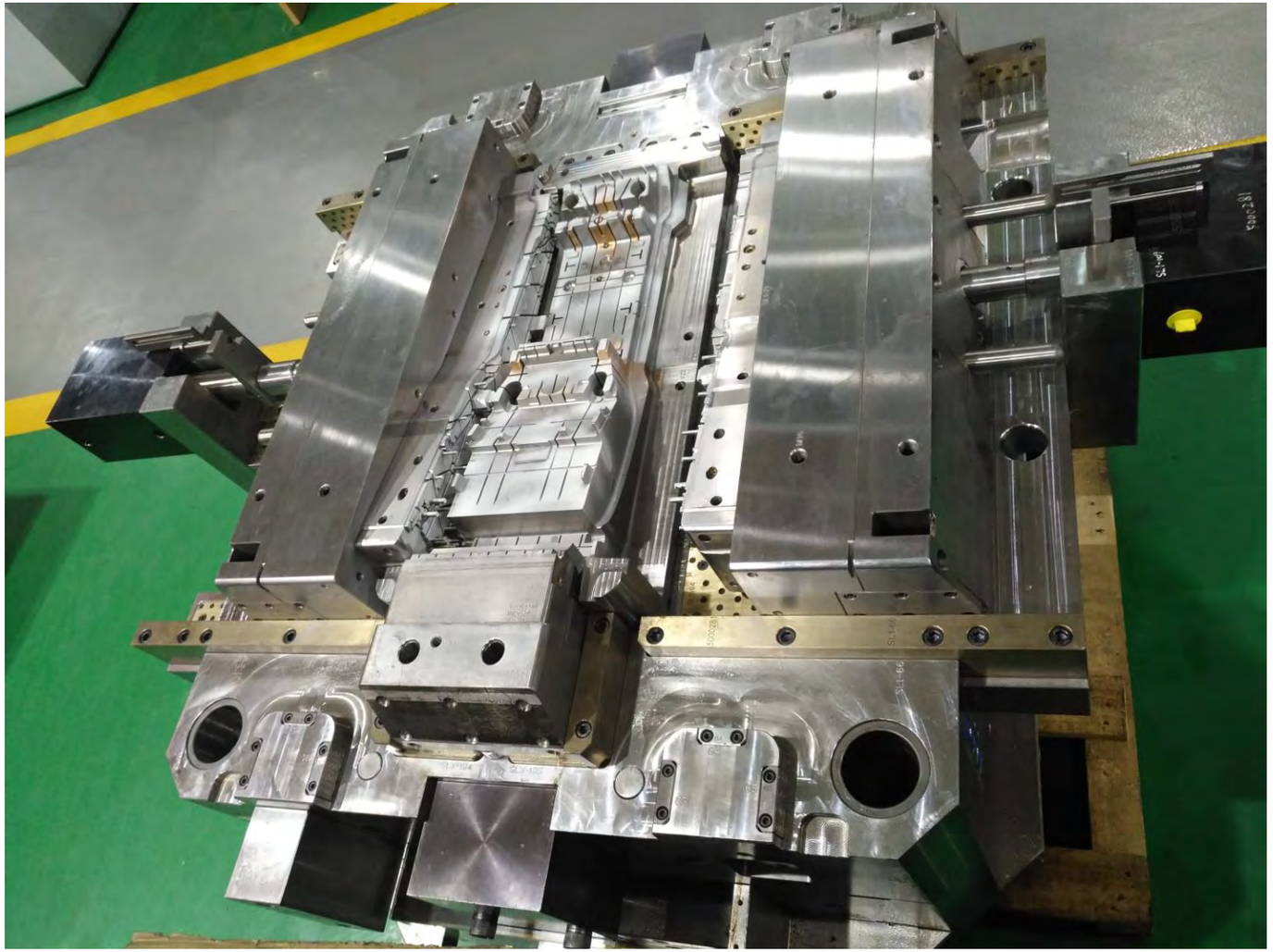
2K Mold For Air Vent Outlet Component

TOOLING



TOOLING





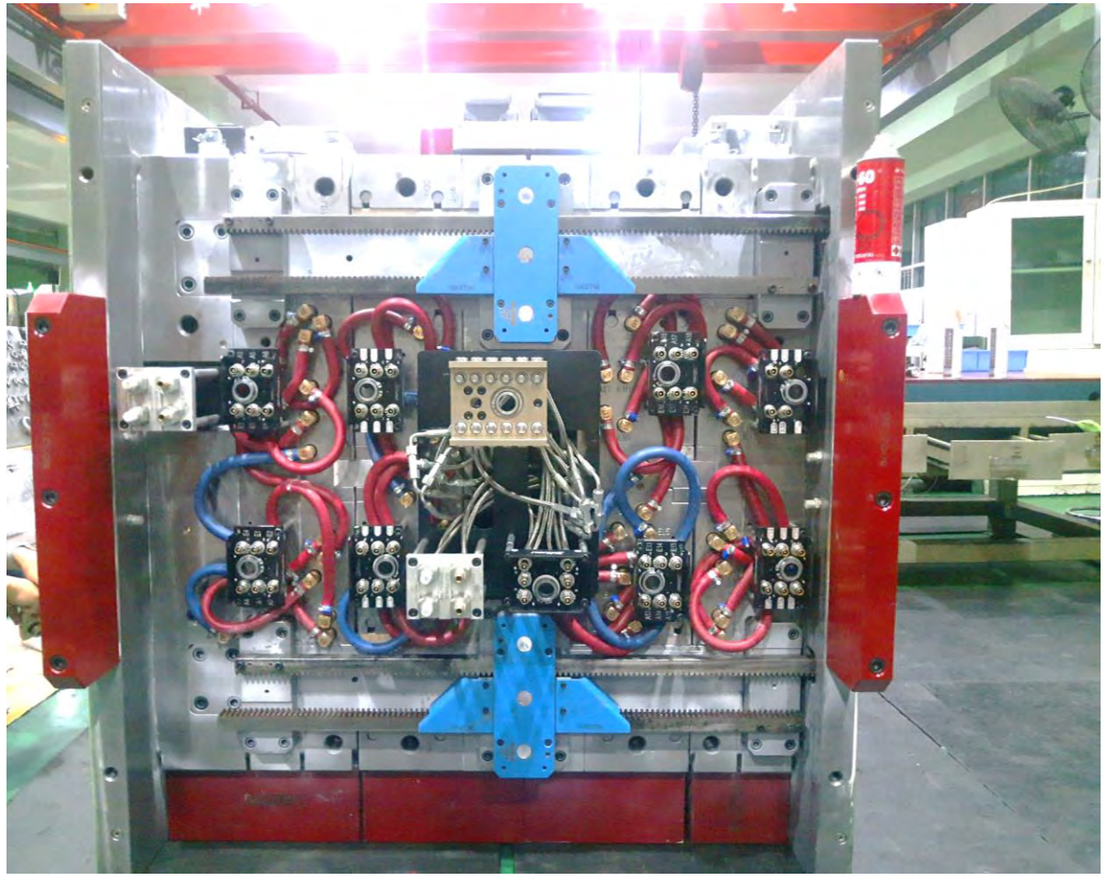
For Center Console

TOOLING

For Center Console

Stack Mold in automotive

TOOLING



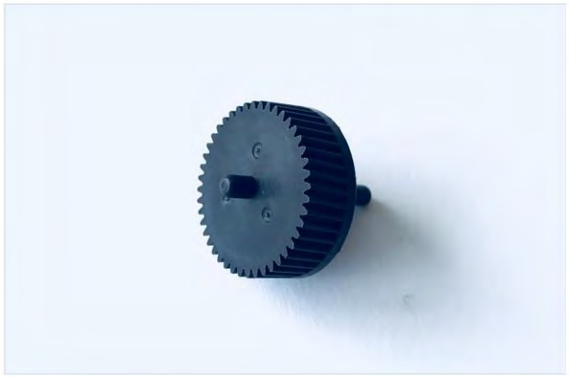
Stack Mold

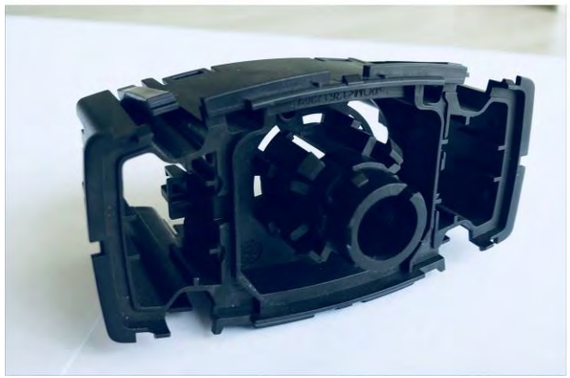
SAMPLES












SAMPLES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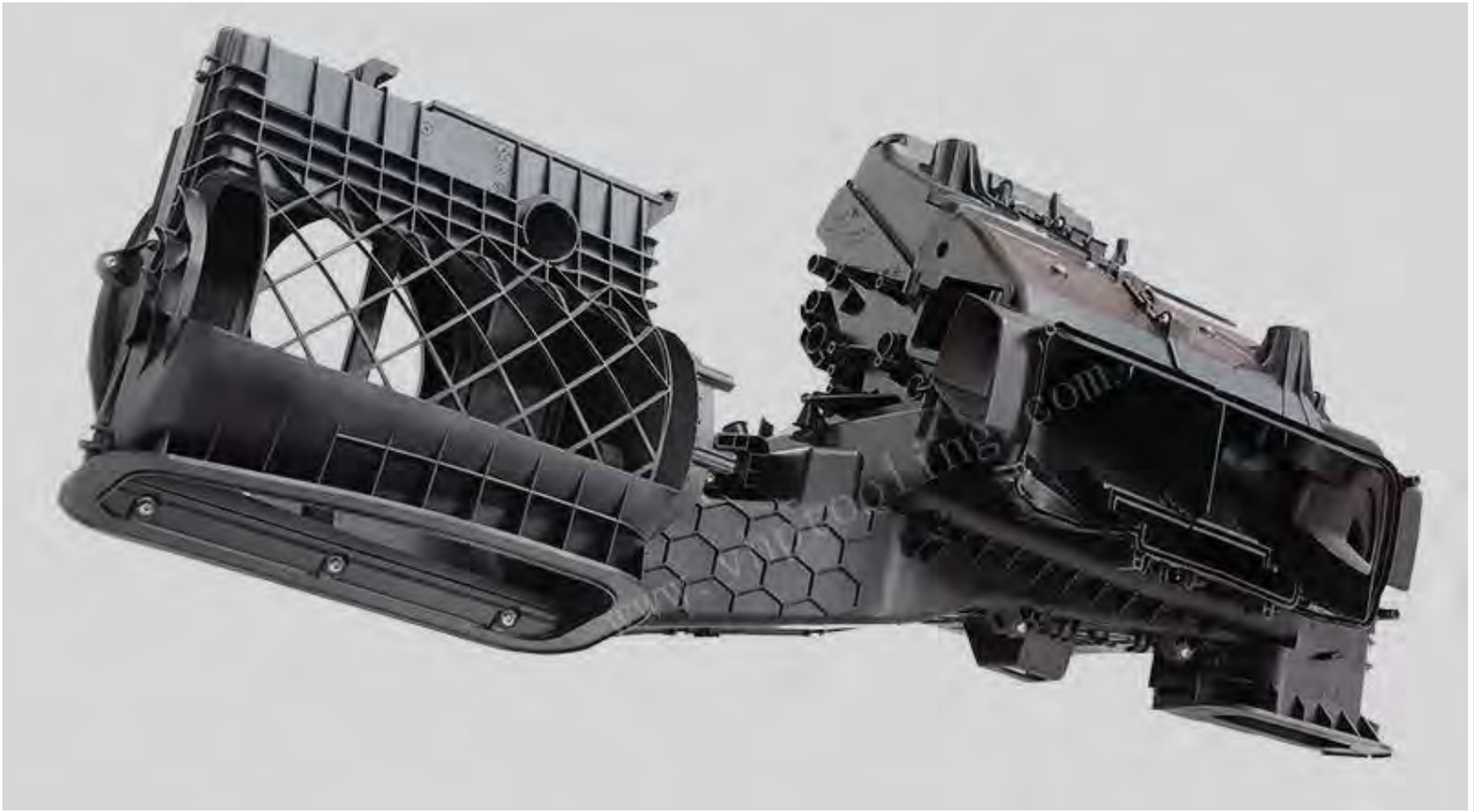
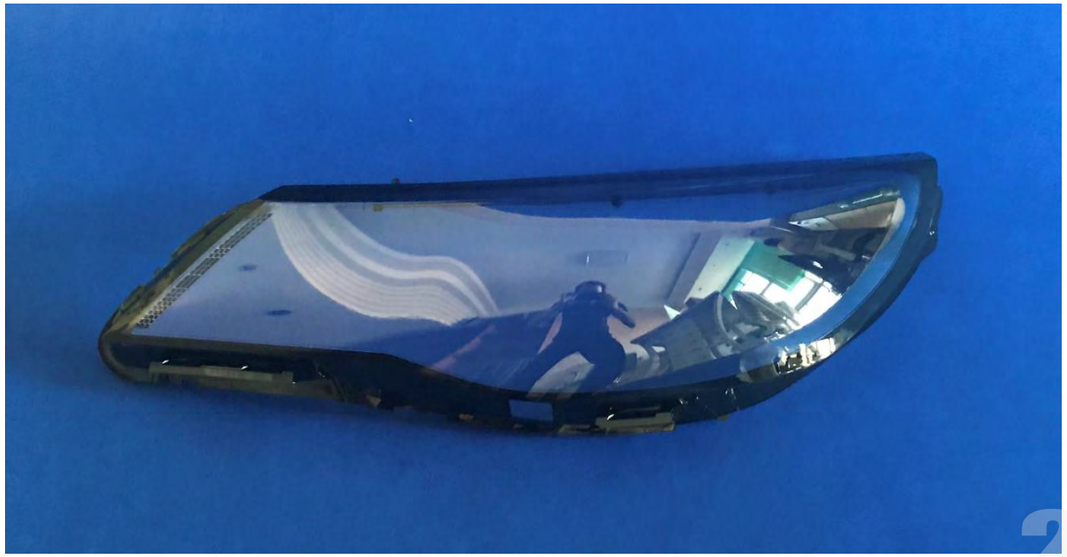
SAMPLES



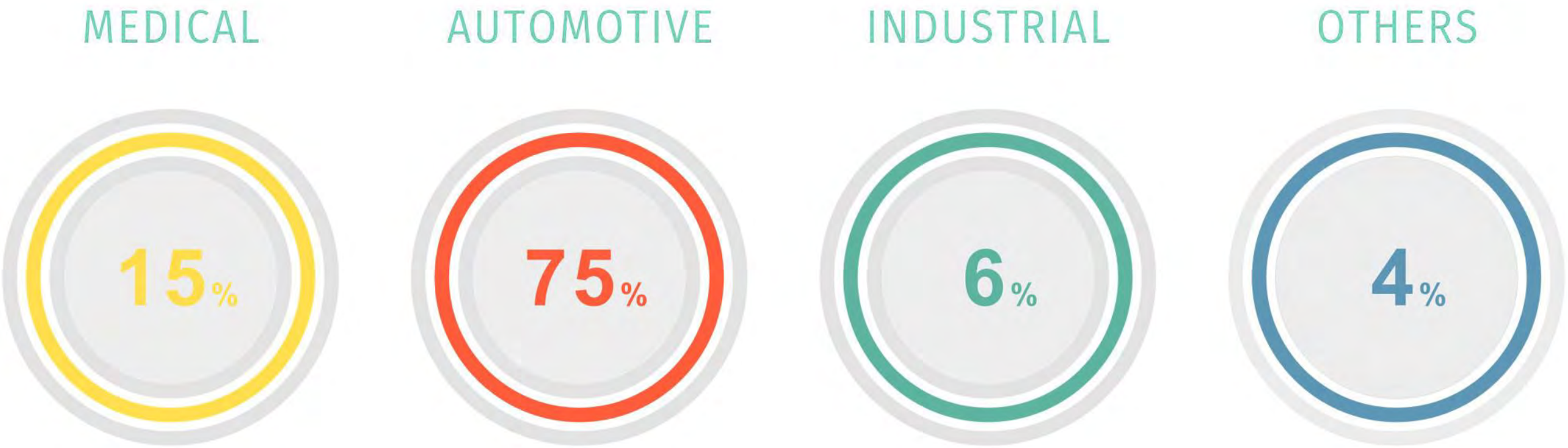
SAMPLES

LIGHTING PARTS 2K



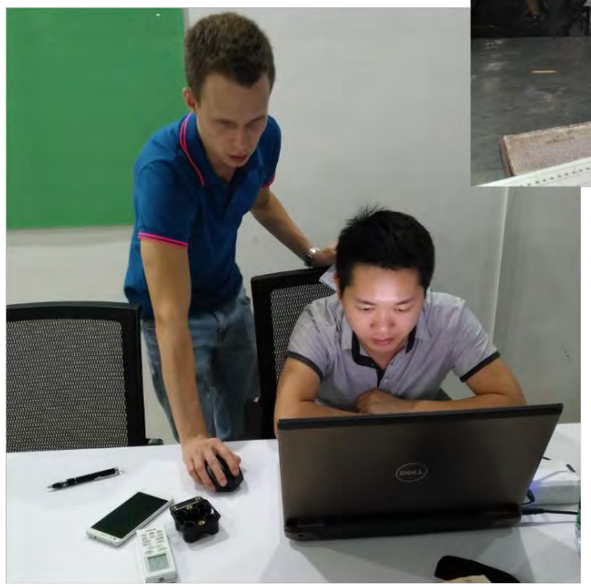
SAMPLES

MARKET DISTRIBUTION



OUR CUSTOMERS

CUSTOMERS WITH VHP



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THANK YOU!

2023