



Factory Entrance



Office and Engineering Center

JinWei Industry Co., Limited (Simply : JW Mold) is located in DongGuan city , GuangDong Province, the south of China. 12 years experienced in plastic mold Making ,molding production ,worldwide delivery and after sale Services. Serving industries include automotive, home appliance, Electronics and industrial products.

JW team can Provide customer full support from free Estimation and analysis, fabrication to project complete. Reply emails in 24 hours Maximum. JW Mold is Capable to build over 110 tools a year from small Electronic product tool to big complex Automotive part , Currently building mold within 80- 7500KG. there will more machines available in the year 2020

Jimmy Tang is the owner of this company, before create JW mold ,he had been working for 3 of Top 10 famous mold makers in south of China more than 12 years totally, most of the time worked in sales dept as Marketing or project Manager . Therefore Jimmy and his team have deep understanding in USA and European tool standards , as well as their concerns on Quality , leadtime ,price and Service .

■ End Customers



Full customer oriented, 12 Years No Change

America



SL Corporation

Purchase Order
AFX MOLDING, L.L.C.

Asia

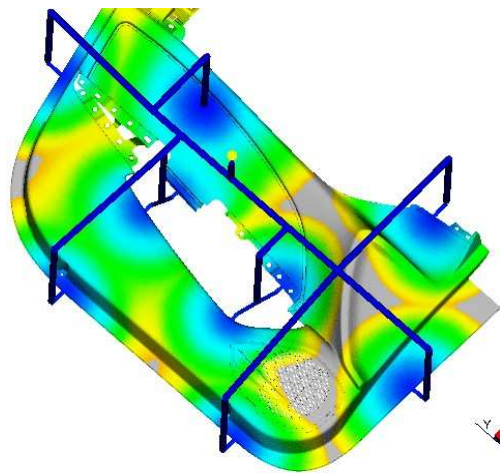


Europe



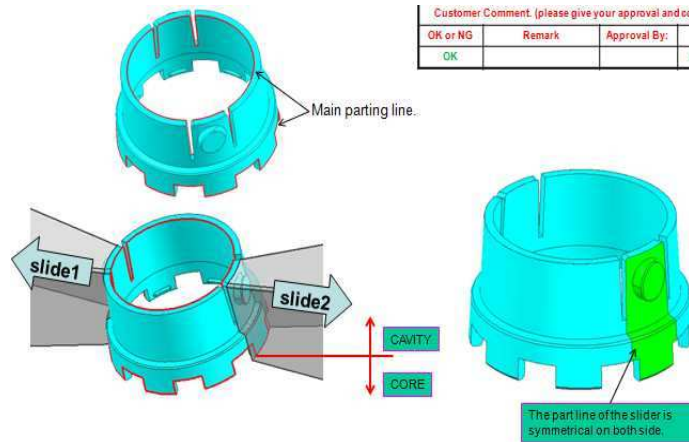
SANHUA AWECO

CAD/CAM/ CAE Capability



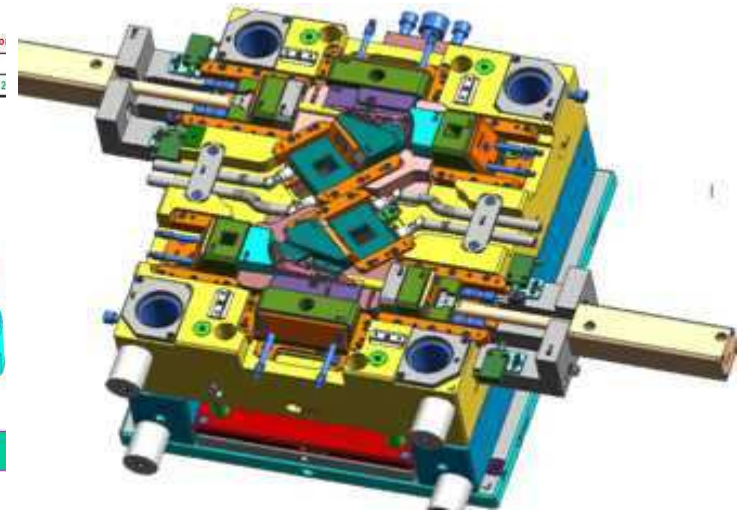
Mold Flow Analysis

Always within 1-2 days



DFM Report

Complete in 1-2 days



Mold Design

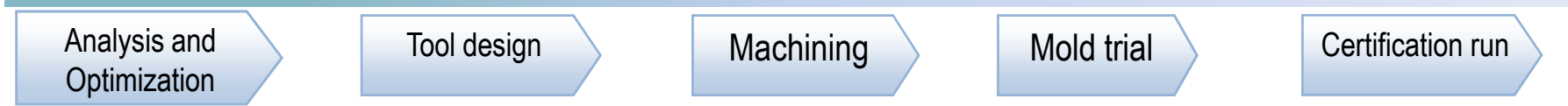
Finish in 0.5-1.5 weeks depends on complexity

Using UG NX7- NX10 for tool design and CNC programming. Autocad for create 2D drawings. Autodesk 2013 for mold flow simulation. The Customer,s data format can be in step, Catia, Pro-E,X-T, Igs ,Solidworks, No problem for JW to convert the file.

The Product Design and feasibility study will be performed by experienced designers, submit the report in PPT document With issues and proposals. Also provide modified 3D model with DFM together for approval. Afterwards the tool design will be complete in 3D format . The 2D assembly drawings is follow up after 3D design finalized



Project Management



- Analysis and Optimization**
 - <DFM Report>
 - <Mold flow Report>
- Tool design**
 - <Design audit list>
- Machining**
 - <Weekly progress report>
- Mold trial**
 - <Process data sheet>
 - <Tool issue Report>
 - <measurement report>
- Certification run**
 - Before tool shipment.
 - <Mold check list>

JINWEI Design for manufacture

Gate location and Tool layout

Customer Comment (please)

JINWEI Moldflow Analysis Report

JINWEI Tool Specification

模号	产品名	尺
N19064	插头 Fixierungsnagel, 1001045_a	约20 23 1.8
N19062	高筒 Patronengeh. Bajonett L202, 1001040_b	约48 20 29

JINWEI Progress report

Year 2019	
Description (Green grids are sundays or China public holidays)	Pr
Mold Design and customer approval	Pr
Hot runner system Purchase	Pr
Mold Base & Steel	Pr
Place order & Delivery for Moldbase	Pr
Place order & Delivery for Steel	Pr
Machining process	Pr
Drill Waterline , thread hole	Pr
Rough CNC Cut	Pr

试模起始时间:	
第几次试模 Trail No:	
Part Name 零件名称	
Part No. 零件编号	
Resin 塑胶原料	
Color 颜色	
Cavity Number 模穴数	
温度公差 ±15°C	
Zone 1 前段 °C	
Zone 2 二段 °C	
Zone 3 三段 °C	
Zone 4 四段 °C	
Zone 5 五段 °C	

JINWEI Mold trial Report 试模报告

JINWEI USER'S MANUAL for Mold No _____

- 一. 模具资料 MOLD INFORMATION3p
- 二. 模具使用说明 THE OPERATION OF MOLD.....4p
- 三. 模具维护保养 Operation and Maintenance 11p
- 四. 附件/备用清单 Accessories and Spare parts list 14p
- 五. 模具检验单 Final Inspection report 15p
- 六. 用户意见反馈书 Comment and Suggestion 17p


Shipment

<Out put check report>

Production

- <Process data sheet>
- <Packing instruction>
- <Quality instruction>
- <In process Check record>

Measurement and Quality Control

 Sample Measurement report										
Part Name	FM Gehae	Part No:	70.004.812	2018-10-08	Cavities:					
Customer		Mold NO.	N18016	T4	Material	PA-GF40 Grivory				
Item	Design Spec	Upper Tol	Lower Tol	Actual Dimension					Result	tool
				Cav1	Cav1	Cav2	Cav2	Cav2		
1	Ø9.9+0.1/-0.05	Ø10	Ø9.85	Ø9.91		Ø9.88			OK	CMM
2	Ø7.3+/-0.05	Ø7.35	Ø7.25	Ø7.33		Ø7.35			OK	CMM
3	Ø13.2+/-0.05	Ø13.25	Ø13.15	Ø13.18		Ø13.18			OK	CMM
4	Ø9.9+0.1/-0.05	Ø10	Ø9.85	Ø9.88		Ø9.89			OK	CMM
5	12.5+/-0.1	12.6	12.4	12.48		12.47			OK	HG
6	11.5+/-0.1	11.6	11.4	11.45		11.46			OK	HG
7	4.95+/-0.05	5	4.9	4.950		4.960			OK	CMM
8	10.3+/-0.05	10.35	10.25	10.28		10.290			OK	HG
9	10.03+/-0.03	10.06	10	10.03		10.04			OK	CMM
10	13.6+/-0.1	13.7	13.5	13.59		13.58			OK	CMM
11	78+/-0.5	78.5	77.5	77.76		77.75			OK	CMM



Hexagon Croma CMM machine . Measure range 1000*800*600mm

- Thorough understanding customer quality requirement.
- Strict quality control system and procedures.
- Equipped high precision CMM, projector, and other measurement equipments. the measure deviation is less than 0.003 mm.

Proceed with the following measurement reports for each mold:

- 1) Steel hardness
- 2) Electrodes dims
- 3) Steel dims
- 4) Sample measurement report after mold trial



VMS Projector, measure capacity 400*300*200

CNC machines



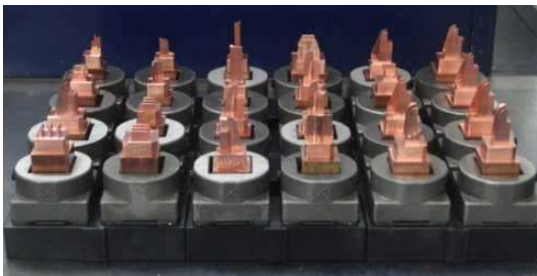
*Till Aug 2020, JW Mold has 4 sets CNC machines in house, 2 of them are high speed machine with 24000 RPM, machining tolerance +/- 0.01mm, Cut area 600*500*300 and 710*460*570 mm respectively*

*the biggest one is "Hartford 1270" with 1270x650*630mm cut stroke. Machining tolerance within 0.025mm. Another big CNC machine with cut area 1000*600*600mm, tolerance +/- 0.015mm*

*More CNC machines will be equipped in year 2021. planning add one more big size CNC machining center with stroke 1500*1000 mm*



EDM machines



1. All operations according to standard operation instructions.
2. Full dimensions measure on electrodes before Process EDM.

Currently there are 4 sets EDM machines inhouse, one of them is a high precision CNC machine from Swiss company "Charmilles" with machining tolerance 0.005 mm, can process Mirror level finish and VDI 3400 series finish

*the bigger ones have 800mmx600*500mm stroke and tolerance within 0.025mm*

*More EDM machines will be equipped in year 2021. planning buy one big size double head CNC machine wth stroke 1300*800*600mm for Process the "Auto Grille " molds and "washing machine tub" molds*

Wire cut and gun drilling machines



Above is Japan Sodick precision EDW machine with tolerance $\pm 0.005\text{mm}$.
another 2 sets precision EDW machines
Are from Taiwan with tolerance $\pm 0.01\text{mm}$



The Deep hole drillings are outsourced From a gun drill shop nearby ,within 300 meters or 0.3KM from our tool shop. That shop has 4 sets big machines with Max drill depth 1.6m per side. So from both sides can drill the 3 meter long steel plate . The holes diameter can be range 3mm to 80mm

Work shop and other machines ,devices



Milling and drill machines



In total 5 sets cranes in JW tool shop . 2 sets 1T, 2 sets with 3T ,and 1 set can lift 7.5T(7500KGS) . that means 80% of big automotive or appliances tools can build in our here



Grinding



The Meeting room Has high definition projector and phone devices Can call to Foreign clients for discuss project details

The Differences with other tool shops:

- 1) Owner directly managed So could provide most aggressive but achievable prices and leadtime
- 2) Separate mold building by several teams for best management of cost / leadtime.
- 3) Finish all molding surface through machining, hand grinding is not permitted except those prototype tools.
- 4) The employee turnover as low as 5-10% each year .this is very important for experience accumulation and keep quality stable

Tool testing and Molding production

JW Molding shop is 600 meters far from JW tool shop, has 100-250T machines in house for both tool testing and production purposes

For Some kind of parts which still need 2nd process after molding for example painting ,silk screen,pad painting ,assembly so on. We can provide these services by cooperate with the nearby factories , all within 3 Kms so control the leadtime are convenient . The paint color are normally base on Pantone or RAL standards or customer requirement . JW will responsible for the Quality, no excuse.



Whatever test inside or outside of JW ,JW will Follow customer,s tool trial prodedures and standards.
Use scientific mold trial method, check feed balancing by 50% and 80% percent with consecutive 5 shots
put printed cooling diagram and temp. sensors beside the machine ,connect cooling lines separately without mix up.
Send info to customer just after the trial finish . Record the issues and solve one by one after tool off the machine .

For big tool trials ,we do it outside in a professional tool test company which is 1200 meters far from JW tool shop. They have 15 sets standard machines range 80-1000T , 1 set 250T two color machine ,with core side rotatable and 2 parallel inject units.



700T

1000T



1600T

Also more bigger machines for example 1300-2000T are available in another professional tool test company with 20 KM distance . Some parts has heavy thickness or much glass fiber filled will require big machines for easier get full shot .

Automotive Molds (For end customer : Lear / BMW)



Part name: HANDLE_RELEASE Latch

Mold Size: 650X600X633mm / 1850 KGS, Resin: PA6-30GF

Total 4 cavs. Mastip hot runner system to cold gates

2 sliders per cavity. Pilot by AHP Merkle Hydraulic cylinders

1.2344 full hardened steel for cavity inserts for able to Apply BMW texture

1.2083 full hardened steel for inserts of all other molding surface

Built the 1st tool in 2016 ,finished by 3 times of mold trial

For 2nd similar tool built in 2018, only performed 2 times trial before shipment

Technical Parts of home appliance Industry



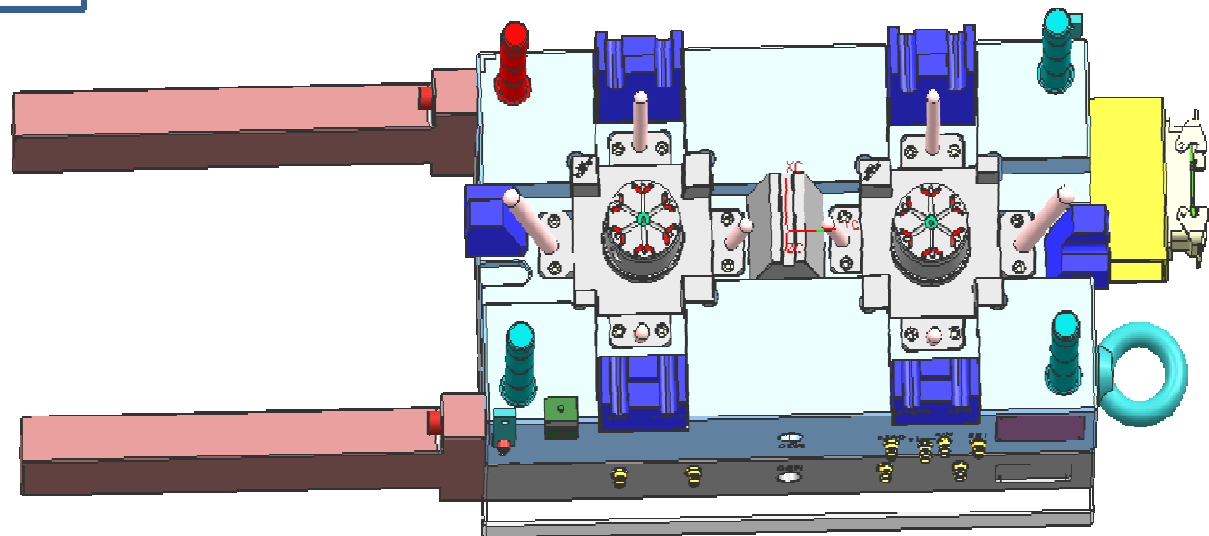
Mold for Bend Tube

1+1 cavs

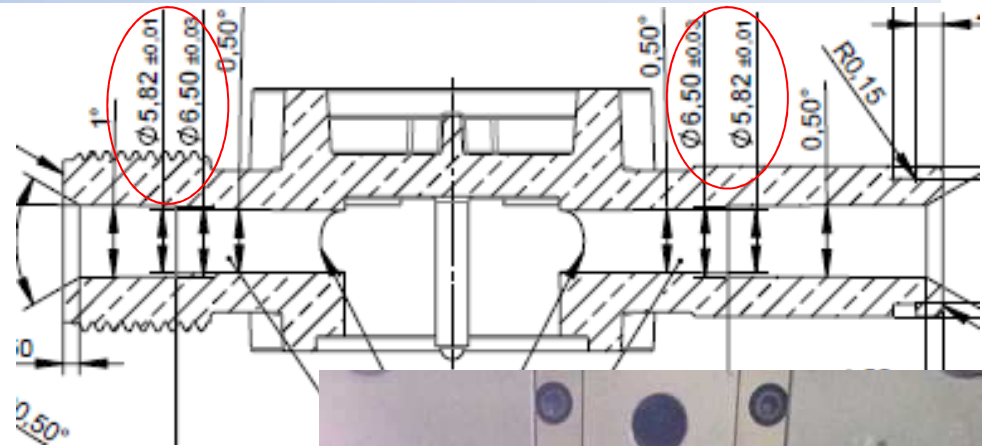
With 2 curved sliders for each cav



Made Interchangeable inserts here for with or without the "hoop" feature
Part name : Pump Housing
Material : PP GF30, full surrounded by sliders. Release the "tube" by Hyds which under 2 steps movement. Keep the part roundness is important and difficult. Built 2 similar tools in 2016 and 2018 separately
Moulds size about 1700*500*650mm

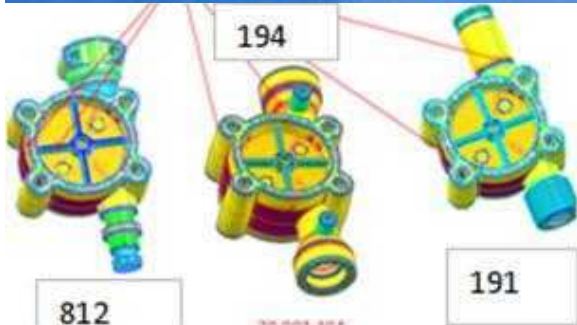


Technical parts for variety of Industries



The Swiss customer required 2 dims with tolerance ± 0.01 , another 2 dims ± 0.03 because these locations need seal with liquid

Part Name : Gehäuse
Dim: 81*50*25
Material : PPA 40GF



Produce 3 versions of the part by exchange the slider inserts

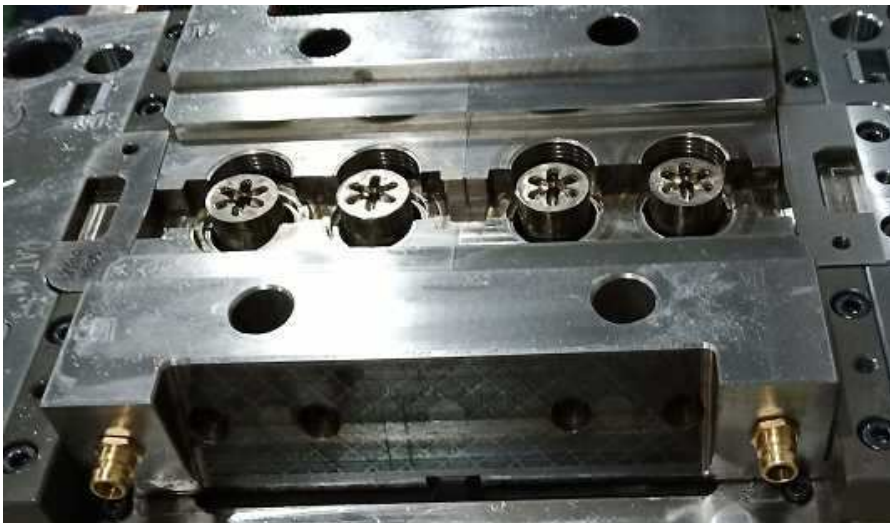




V=9.87 cm³

Part name : inlet hose seal joint
Mold Cavs : 4
Mastip 4 hot open nozzles to cold
Runner tunnel gates

The Material is
PPA+50%GF
(GRIVORY HTV-5H1)
Need temp Min. 140
deg for mold surface
Therefore must use the
High temperature
resistant components
To avoid oil leakage or
inserts over expanding



Transparent & high gloss polish



Actually Very clear and nice surfaces, looks dark because of the photo taking problem



7-9mm thick. So cycle time between 70-100 sec



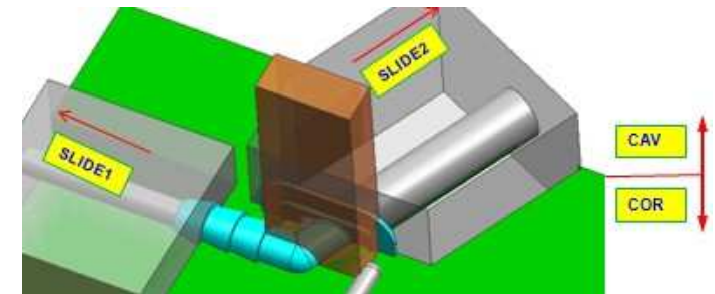
Big cup, Clear PS ,Dim 200*120*300mm

LED lens , Clear PC ,Dim 450*300*15mm

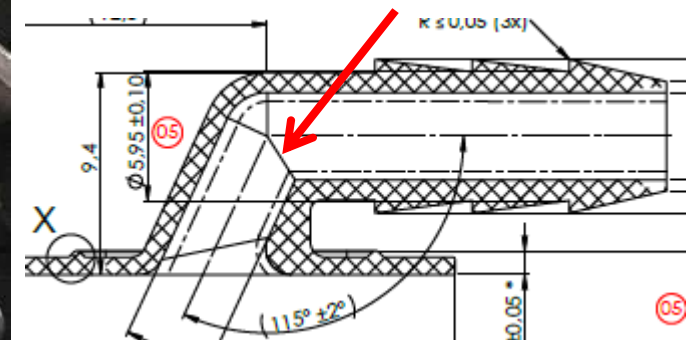
Multi cavities (example 1 ,change material in same mold)



Part name : tube out , 30*10*15mm
It is the inner component of hearing device. Most of the dims with tolerance $\pm 0.05\text{mm}$ but customer required use 2 material for production. The white one is PP while the blue one is TPU . Therefore the tool design must consider the different shrinkage value between the 2 material

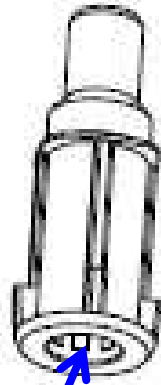


Each cav has 2 sliders and the front touch with each other at the tube end.
Dims were correct , no flashes .

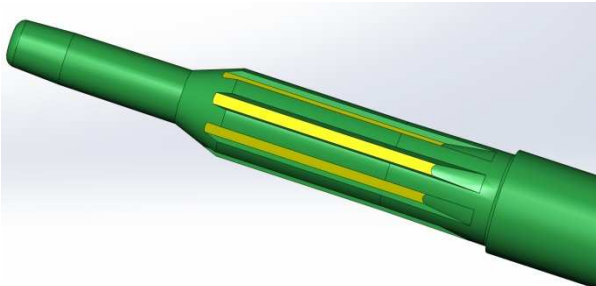


Multi cavities (example 2 ,exchange inserts)

Name: Plastic Sleeve , Material : PBT
Dia 10 *25m . 2 sliders each cavity
Mastip hot runner system turn cold sub gates



There were 2 Versions of the part
With the center area different .
Need exchange the core pins to achieve this
goal . The Yellow areas are about tight
assembly ,need perfect match the steel rod.
Therefore resevered and adjusted steel 2-3
times Before obtain qualified samples



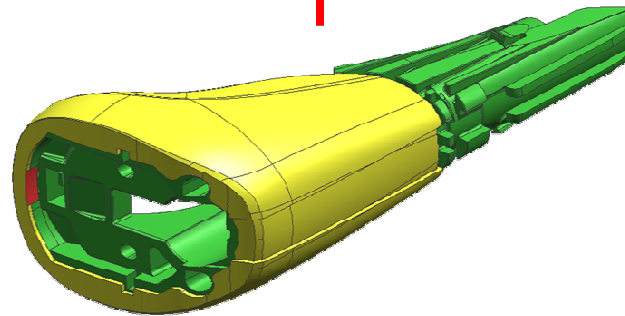
2K & Overmold projects



1st shot: PA66

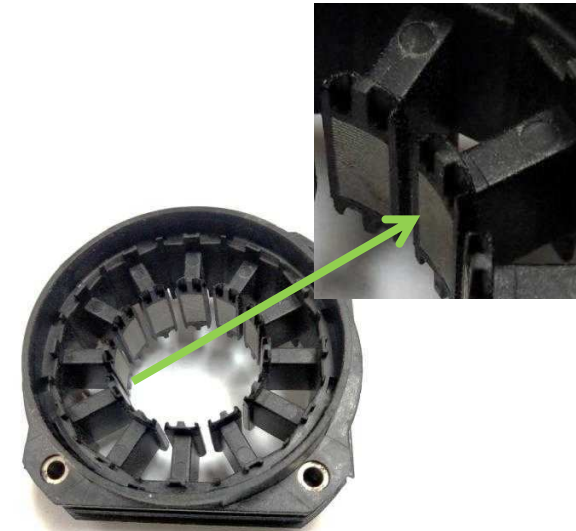
2nd shot: TPE

Need best mold fitting to prevent flashes from happen



1st shot: PA66 2nd shot: PC/ABS

Must precisely control the slides as they do not move out at same moment . one small slide in inside is contained and driven by beside big slide. also to keep PA part no shake on 2nd shot is very challenging because of the part shape.



Part size: 85*80*46mm, Plastic material : PA6 GF30, about 40g

. Insert a 150g wire metal block in the middle for overmolding .2Cavs with 4 side sliders, more than 5 dims required +/-0.02

Insert molding , change 3 versions

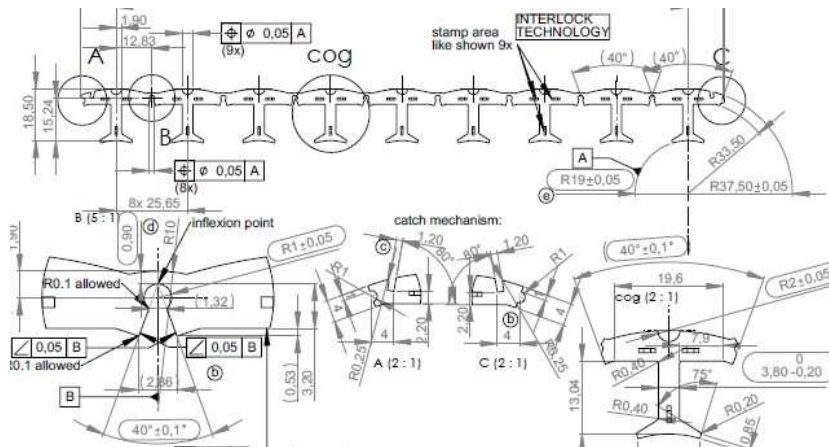


Project : Polkette-15-12-10mm
Overmold material : PA GF20



There is needed to hand load the Stacked conduction Metal sheet onto mold ,then overmold with plastic

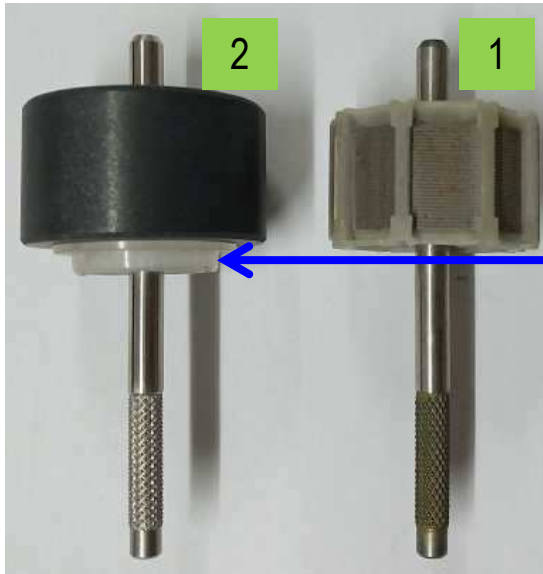
The picture shown 2 heights of stacked metal sheet, 10mm and 15mm , in fact there still has a 12mm ,totally 3 versions.when make samples need exchange the core sets



Each Version required measure dims more than 250 places . Some slots for copper wire through are 0.3mm +/-0.02



Insert molding ,change 2 versions

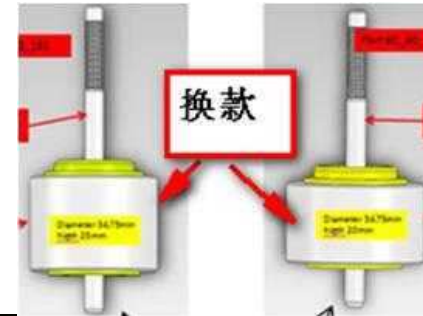


Descriptions about part and actions :

Overall dim : 35*35*70mm

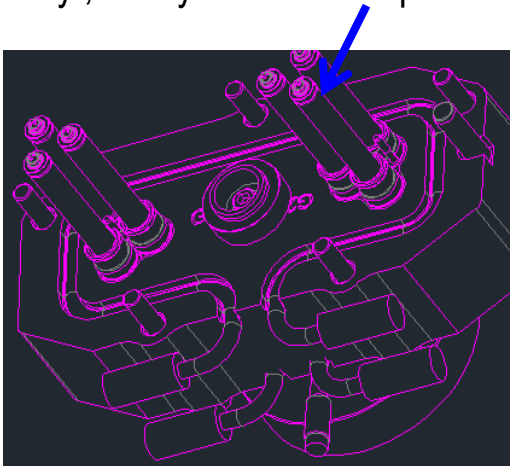
Hand or robot load the steel rod(1), and magnet(2) into Mold to process overmolding the pointed area (plastic)

In fact the magnet has 2 versions with different height . Need exchange the center cores for able to change the Version

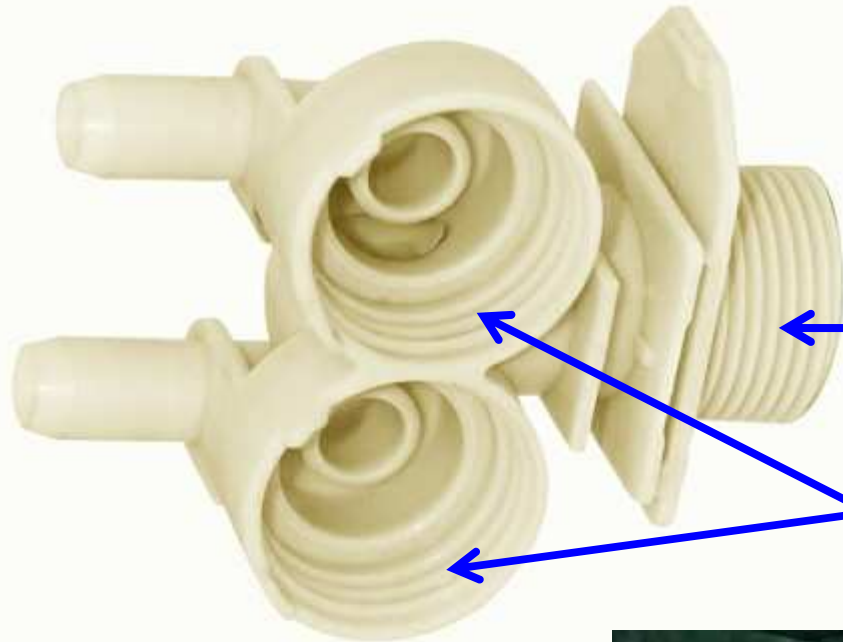


Key points of the mold:

2 cavs .used 3 hot tips for each cavity , totally 6 small hot tips.



Auto unscrew



Description about the part and actions :

Part Name : Valve body

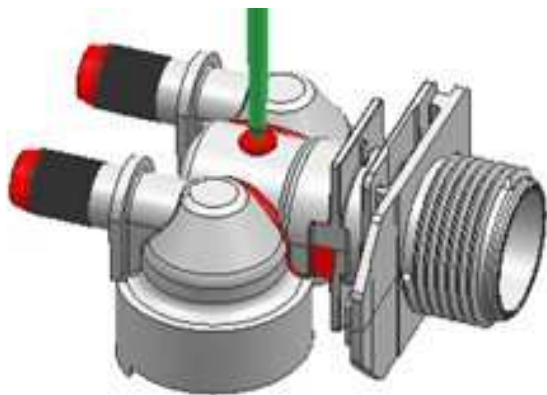
Overall dim : 80*62*40mm

Material : PA6 GF35

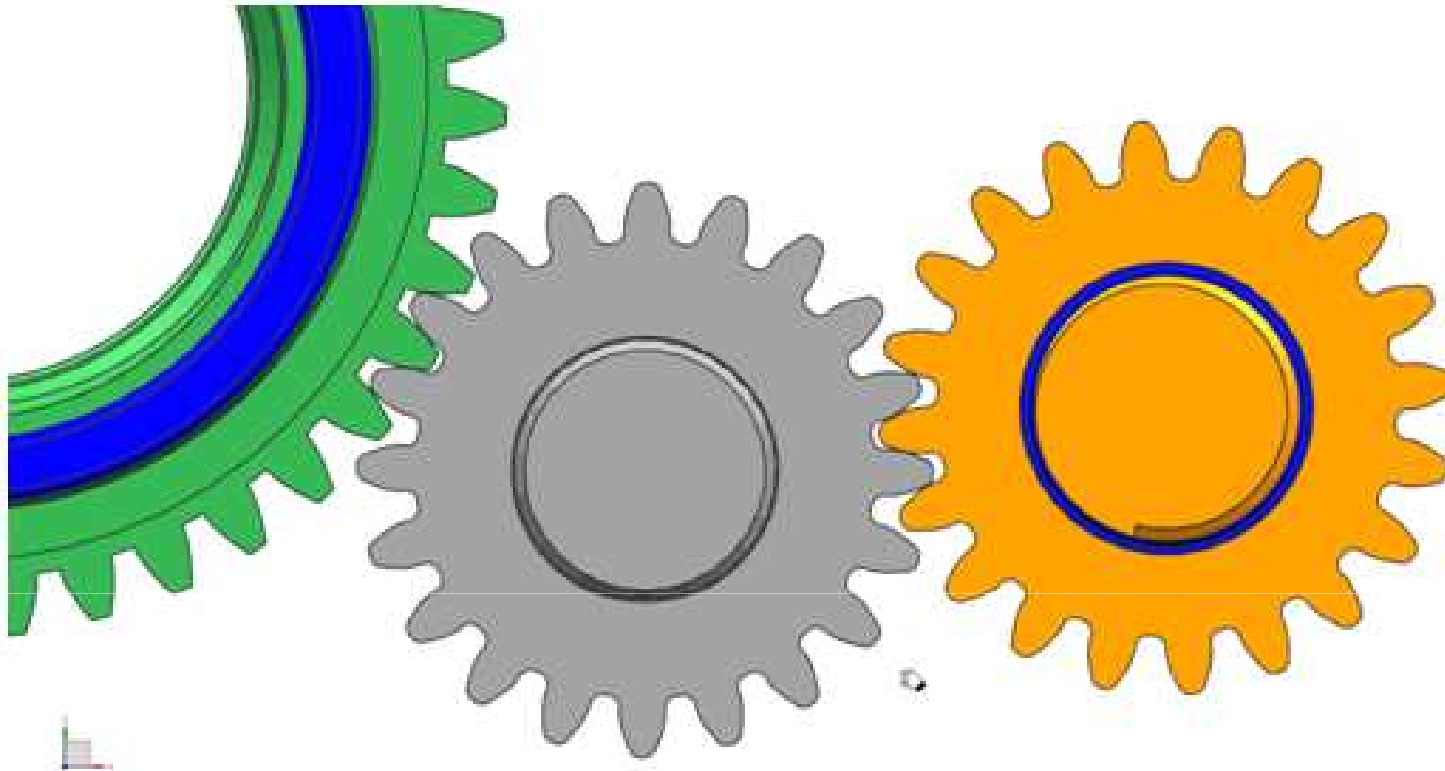
Center hot tip gate

The Outer thread was formed by cavity and core shut off

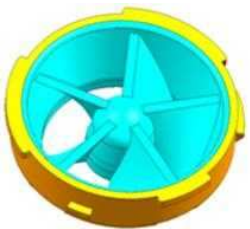
Demoulding these 2 inner threads automatically by Hydraulic driven gear rack system . They are so close to each other, must move exactly same speed . otherwise will block the unscrewing system and hurt the threads



Auto unscrewing & Turn core

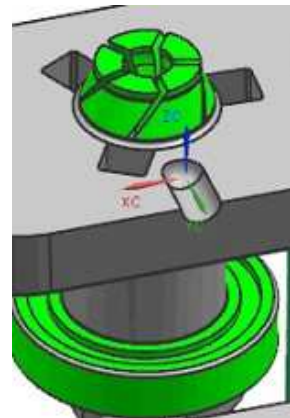


This picture for understand the gears in unscrewing system



POM material ,
20*20*6 mm

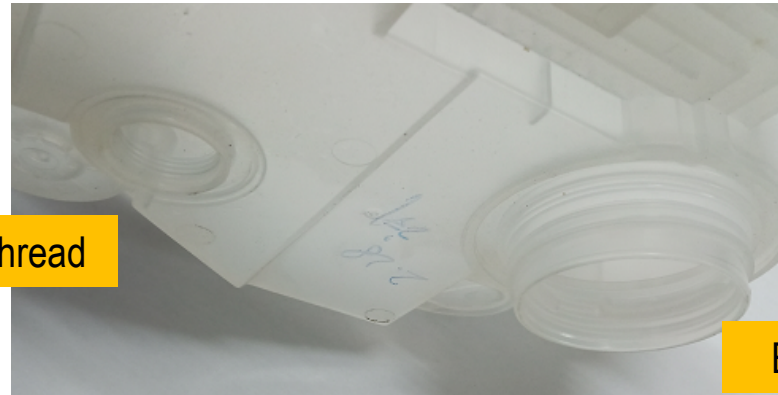
This part looks easy but in fact not . The blue areas are curved surfaces for flow guiding purpose . Not possible form by sliders ,lifters or any other traditional method



The only way is to make turn core system , pilot by hydraulic cylinder



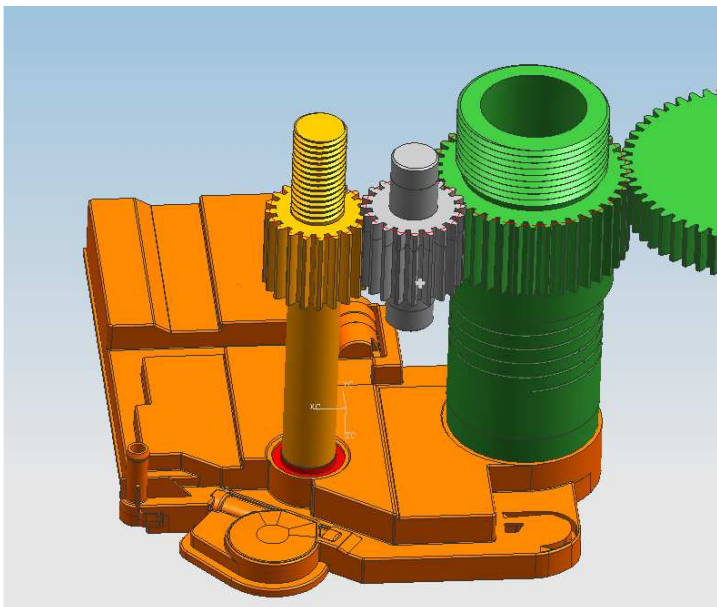
Part Name : Housing ,Size :330*255*50mm/248cm.cu,
Gate : hot valve gate . Mold weight : 2200KGS



Small thread

Big thread

This part has 1 big thread And another small thread need To release by auto unscrewing system .



The big thread about dia 85 while the small one is about dia 40 So define the twisting force ,torque distance to correct value is important .Otherwise will be easy get blocked due to the unbalanced movement



Thin wall & Small Grids



Free drop with 700-1100mm opening depends on part height and machine daylight

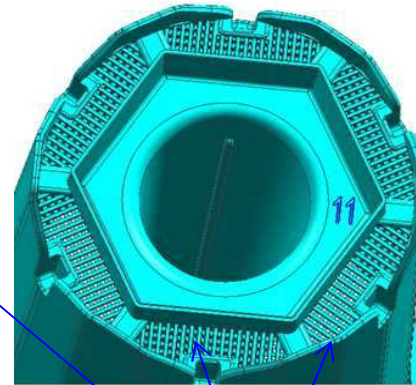
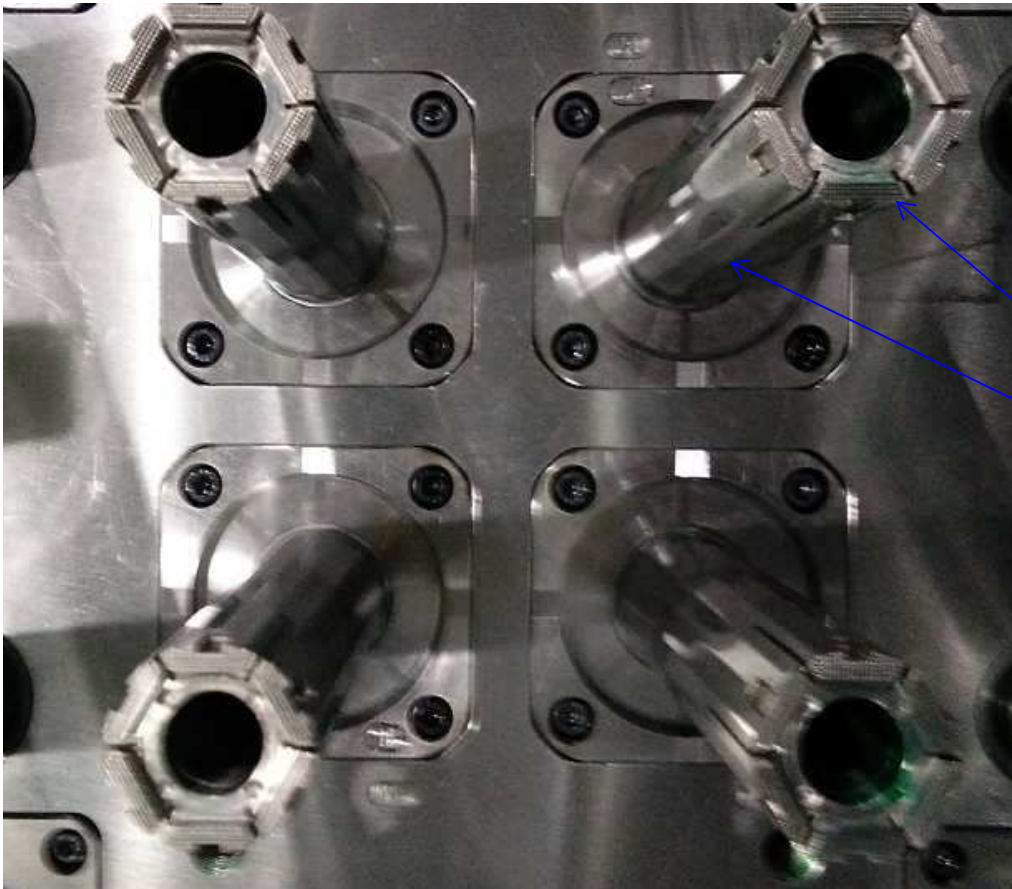
JW had made about 10 sets of this kind of mould for the Swiss Customer

Part name: Gehaeuse. The products were similar, range 120-250mm high . Dia 40-50mm. Wall thickness 0.7-0.9mm is required very uniform, will measure it by cut in 3 different height

If with sliders always make 4 cav mold . The sliders are very high , must have good machining accuracy and fitting , otherwise will be difficult to fix the flashes or mismatch between the Parting line of sliders

Always use Mastip hot open nozzles turn cold sub gates for feeding , must be feed in balance way , otherwise will have some cavs full while others not . If input big injection pressure for short shot cavs , then other cav will have flashes are not allowed. The cavity and core holder plates are installed with sensor for check and adjust cooling temp.

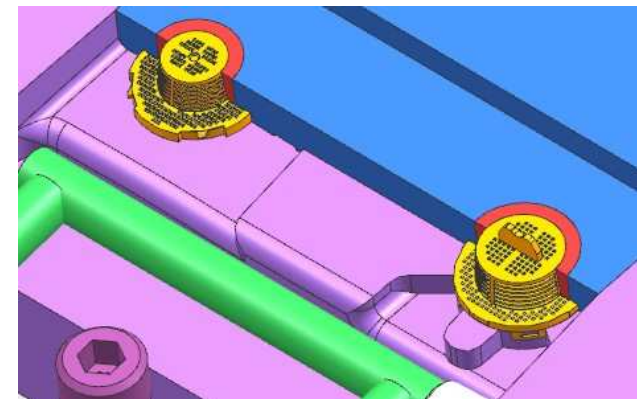




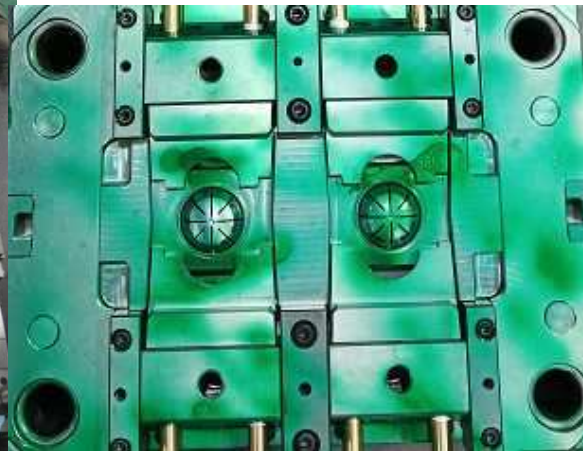
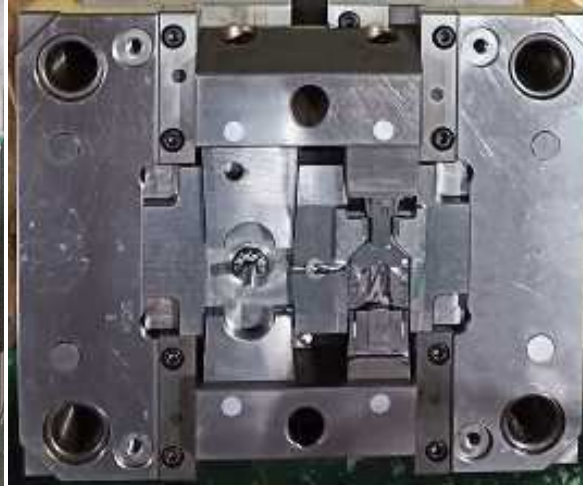
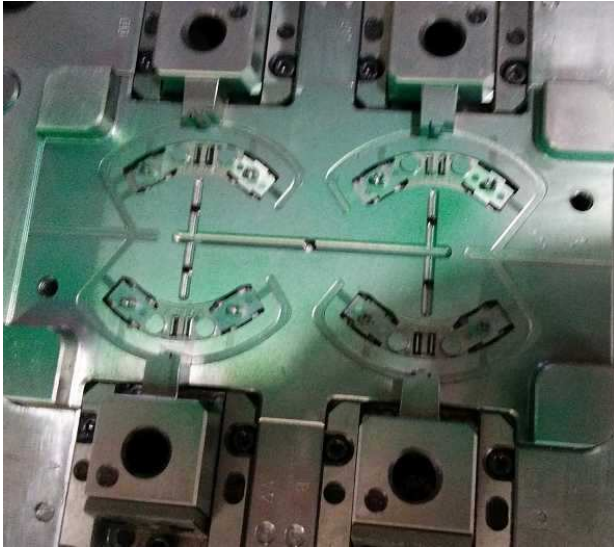
Must ensure all these 0.4mm wide grids are uniform , no corner broken or flashes ,otherwise the water can not go through evenly. The wall thickness of main body is 0.8mm+/- 0.05mm in 160mm high, need keep The thickness and quality stable in the production of millions part



Although this part is as small as about Dia 25*15mm, the it has 0.3mm small grid all around to let water to pass through evenly. Each cav require 2 sliders which must have good machining accuracy and fitting , any flashes or mismatch on those grids are not allowed

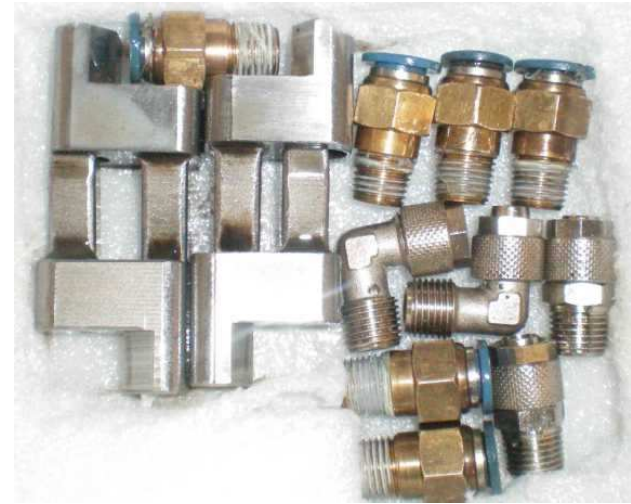


Other Plastic molds Made in JW (Small ones, 80KGS -1500KGS)



Mold inserts and Components

Once the mold running in customer,s factory got damaged ,then need replace the related inserts or components for able to continue the production. Sometimes even not damaged ,but change some local inserts can get mold life much longer .We can support at anytime to make mold inserts or spare parts urgently and then send out by air express. Also based our complete supply chain , the purchased parts for instance the components for Hydraulic cylinders or hot runner system is also easy to obtained in our here and send obroad quickly than anywhere else





Worldwide Delivery



JW Mold has established more than 5 years of cooperation with several professional logistics companies who can deliver our goods to customers all over the world in a timely and accurate manner, whatever by sea, air or mixed transport method. For those Goods to Europe can also be transported by train, which takes only two to three weeks and is cheaper than air freight .

We are also familiar with all kinds of customs declaration and clearance documents, including packing list, commercial invoice, telex release, certificate of origin, etc



Global Services

Customers sometimes concerning about the maintenance of molds after delivery to their country. On first JW will fully consider the easy ways of maintenance and replacement during the design stage ,later make the quality of the mold reliable , provide maintenance Guidance , and some spare components at the time of delivery or send by air express for those easily damaged parts .

about hot runner system, the suppliers such as YUDO ,Mastip etc already set service network worldwide . if any issues , can be directly reach them by call the number on the sign plate of the mold.

We are currently working on the development of Europe and North America local mould maintenance partner, after fixed will inform you. JW mold also can send the mold technicians to do such work overseas

■ The end

<http://www.jwindustry.com>



Thank You !

*Any concerns pls feel free send email to the
Owner of JW Mold at:*

jimmy@jwindustry.com