



TSD Mold Industrial Limited



TSD Mold Industrial Limited is located in Shenzhen, China, supplying plastic injection molds for automotive, electronic, household-appliance and medical parts.

TSD Mold Industrial Limited has a factory of 2700 square meters and has 50 tool makers in total, 90% of the tools made are export to European and North American markets.

TSD Mold's mission is "keep the quality first". We'll keep our best resources to improve the product quality, including equipment investment, R&D investment and management upgrade etc., to supply our customers with "zero" defect products.



➤ Product Design

➤ Prototype

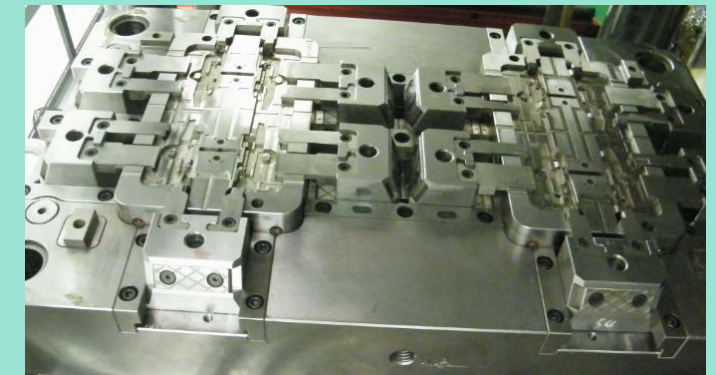
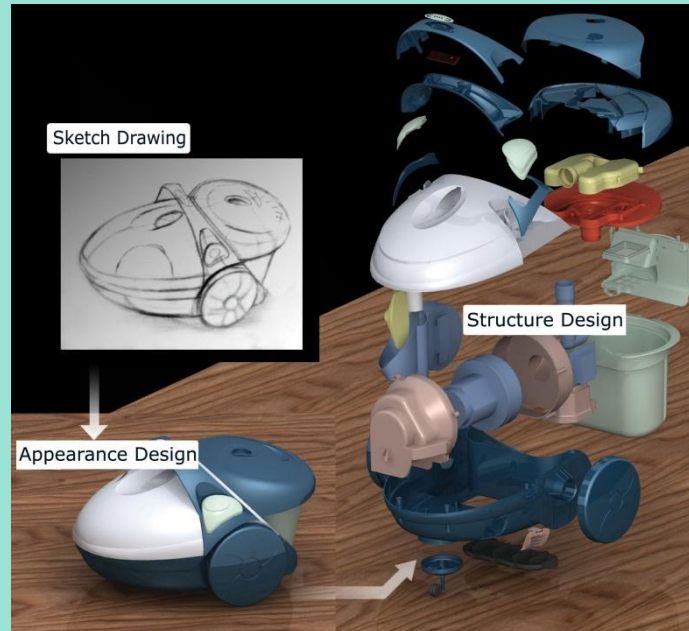
- SLA
- CNC

➤ Mold Design

➤ Mold Making

- Prototype mold
- Precision mold
- Multi-cavity mold
- Insert-molding
- Unscrewing mold
- 2 shots mold
- Hot runner mold

➤ Pre-production



➤ Main activities: Thermoplastic injection Mold manufacture

➤ Number of Employees: 50

- Marketing & Project Management: 3
- Design & Technology Engineers: 5
- Toolmakers: 33
- Mold Trial Engineers: 2
- QC Engineers: 2
- Planning Engineers: 1
- Purchasing Engineers: 1
- Office Personnel: 3

➤ Size of Facility: 2700 m² / 29,060 sq ft

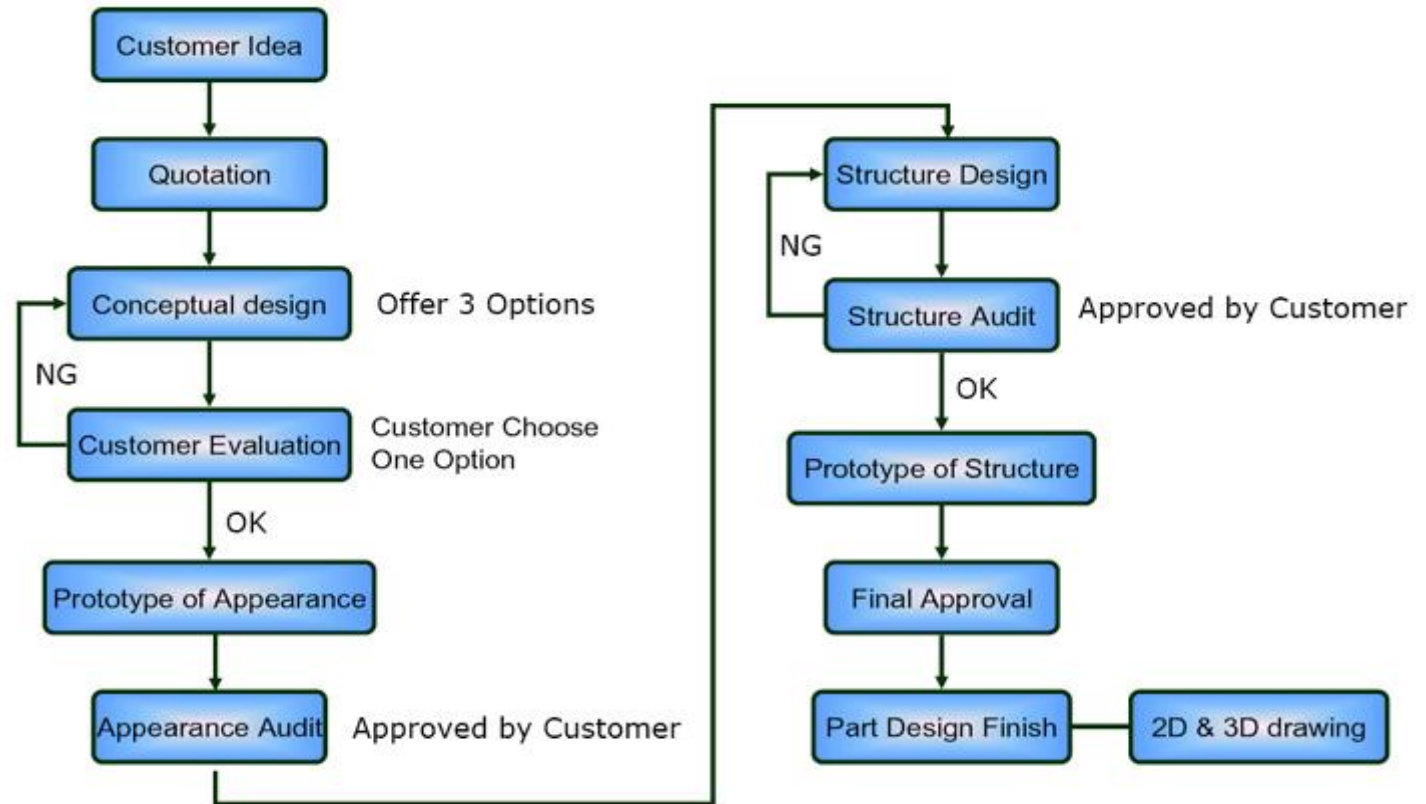
➤ Main market: North America, Europe

TSD product design team can help to complete and finalize your part model based on the original model and your requirements.

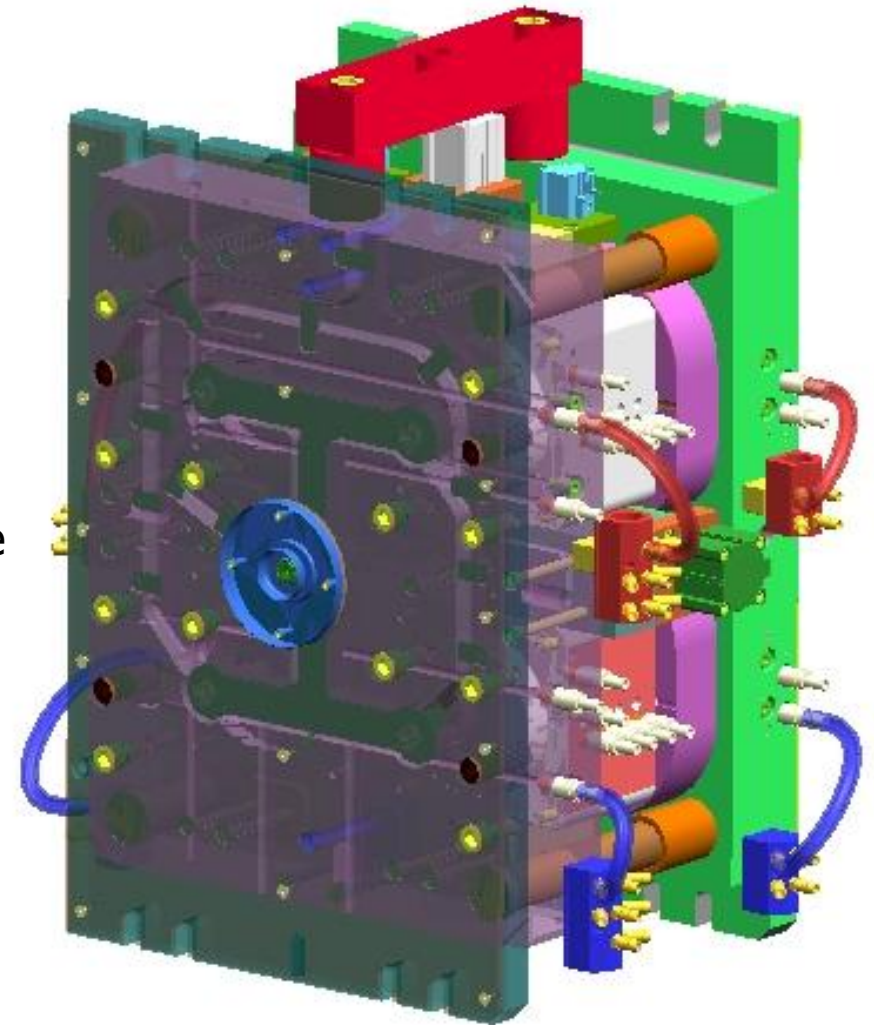
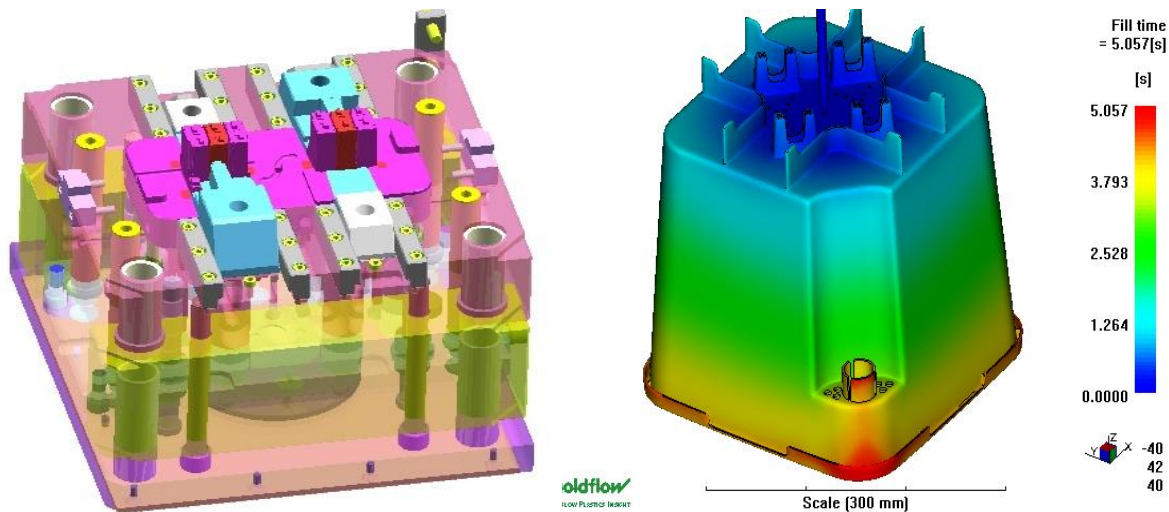
TSD design team can also check the part design in regards to the molding to optimize the part design for the best condition for molding.

TSD use Pro/E and UG for the design.

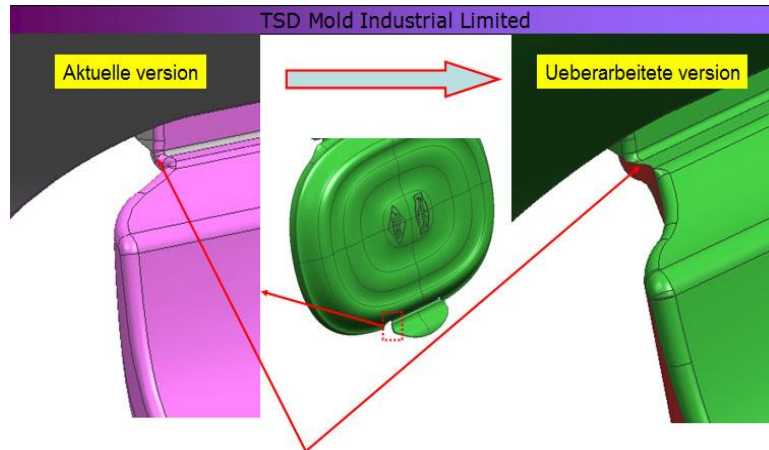
With design skills and techniques and our experiences in mold making, we are sure that TSD can bring you a successful product development.



- North American engineering standards
- Complete in-house design facility
- CAD Software: Pro-E/UniGraphics/AutoCAD/etc.
- Mold Flow analysis upon request
- Preliminary design layout provided with request
- Part analysis based on molding provided as request
- Quotations provided within 3 working days
- Drawings updated and confirmed before steel cutting
- Final 2D and 3D designs keep on data base, will be delivered to customer with tool shipment.



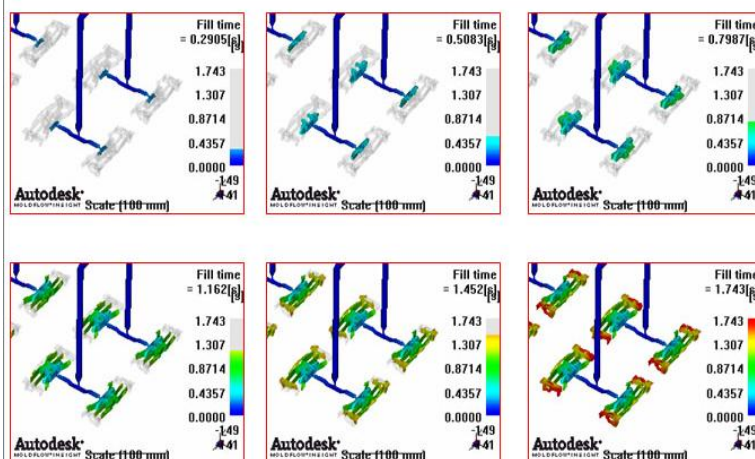
➤ Part modification and suggestion



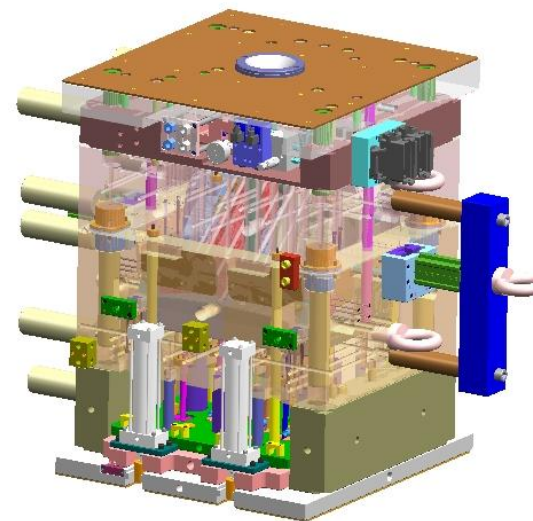
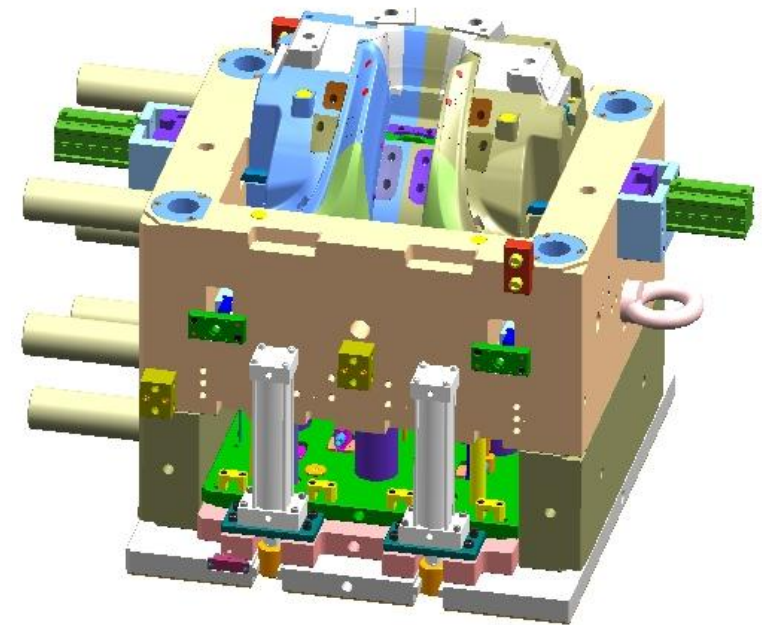
Der radius hat hier hinterschnitt kundenseitig. Wir haben den bereich ueberarbeitet und etwas radius weggenommen.

➤ Mold flow analysis

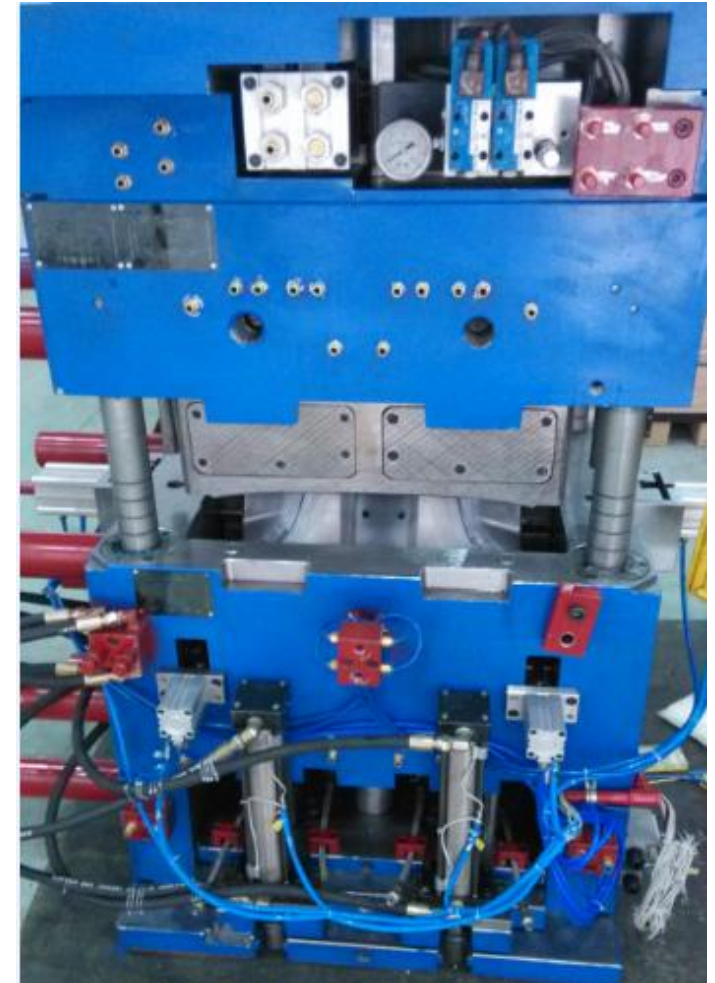
Fill time series

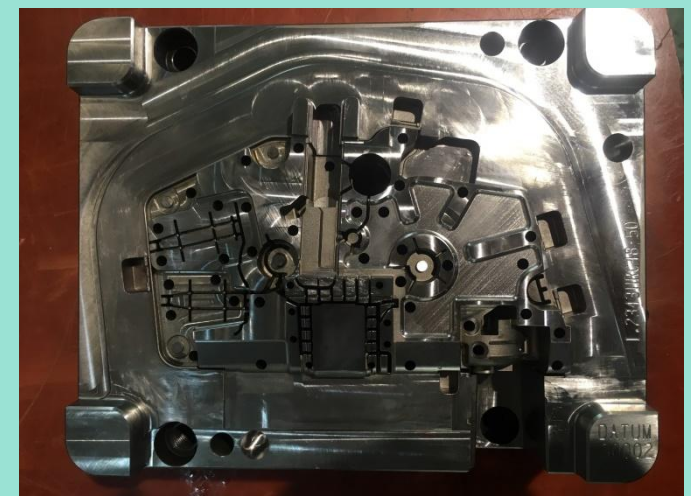
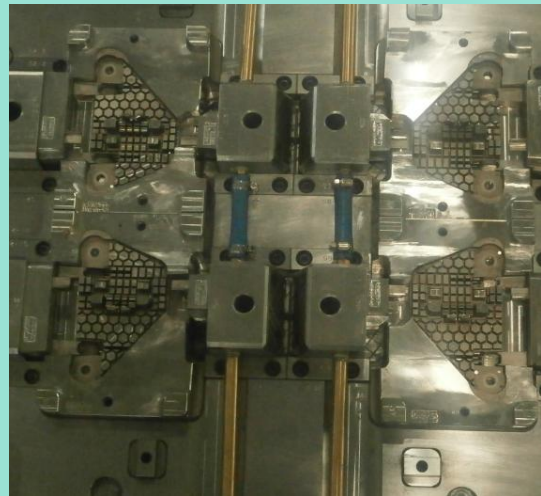
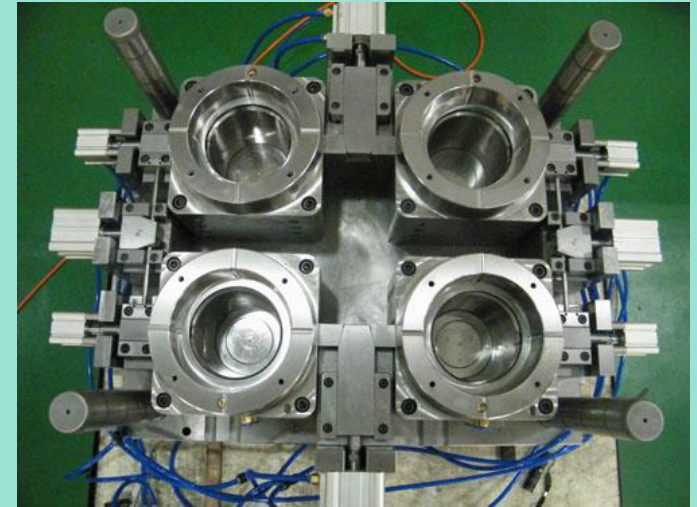
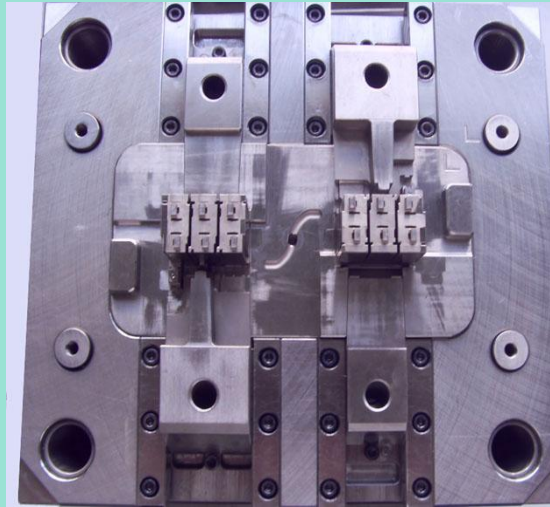


➤ Full 3d design



- We use the steel that suits the tool:
1.2344/H13 , 1.2378/P20, 1.2738H P20HH,
Moldmax, NAK80, 420SS,
- We have experience with most types of plastic:
PP, PC, PS, Nylon+GF, ABS, PC/ABS, POM, etc.
- We are familiar with all major hot runner systems:
Moldmaster, Thermoplay, Incoe, YUDO, HUSKY, etc.

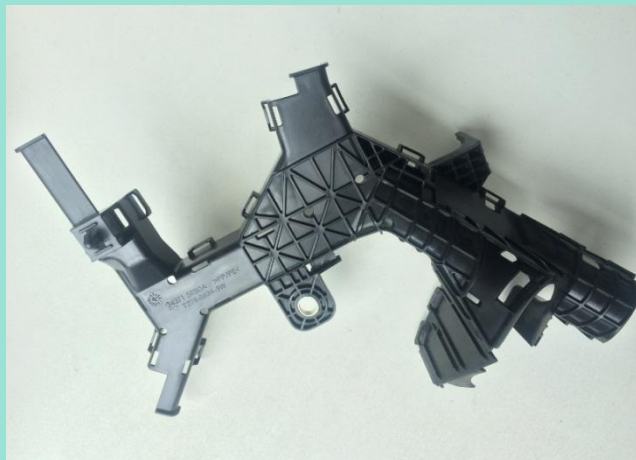
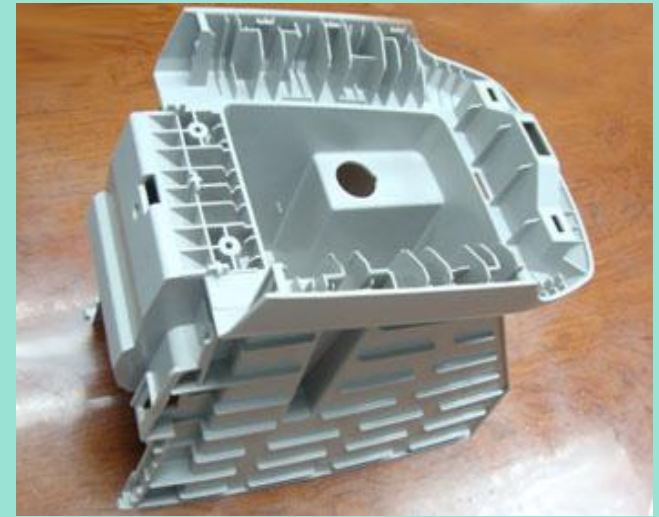






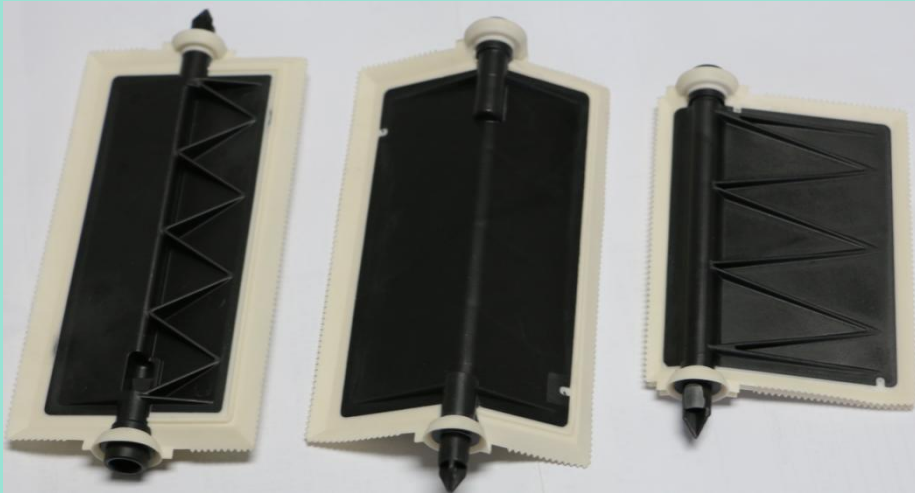
Machine	Origin	Qty.
1. CNC Machining Center (1060*600*600mm)	Taiwan	2
2. CNC Machining Center (1000*650*600mm)	Taiwan	1
3. CNC Machining Center (900*600*600mm)	Taiwan	1
4. Double Head Mirror EDM (1200+1000*700*500mm)	Taiwan	1
5. Mirror EDM (350*250 & 800*600 & 1800*1100mm)	Taiwan	3
6. Milling Machine	China	3
7. Slow Wire Cut Machine(500*350*300)	China	1
8. Grinding Machine (400*200*300mm)	China	6
9. Lathe Machine	China	2
10. Injection machine (120Ton & 250Ton)	China	2
11. Fitting Machine (1300*1000, 120Ton)	China	1
12. Projector (250X150X200)	China	1
13. CMM(600*500*400)	China	1

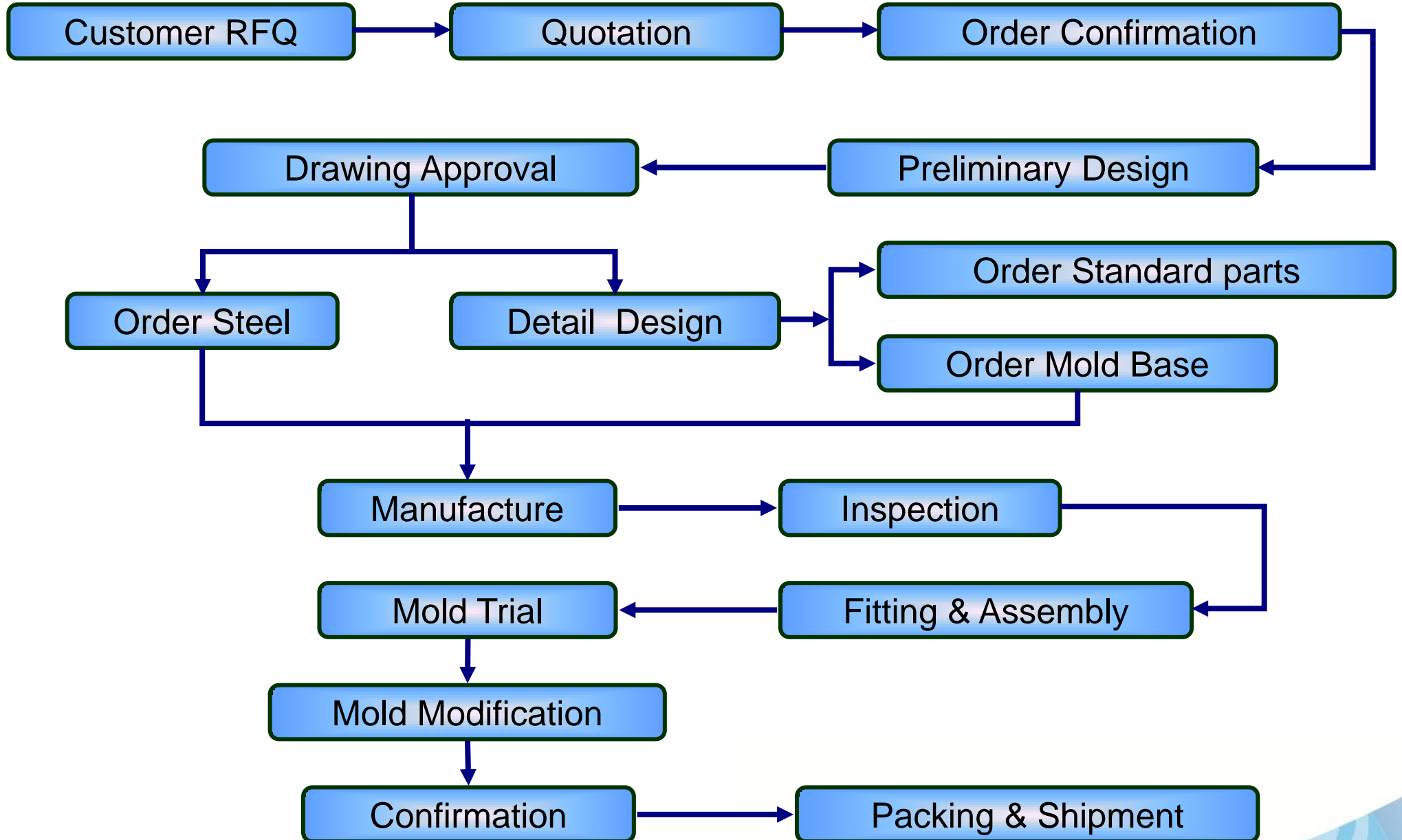













➤ Mold specification



TSD Mold Specification


EN ☒

Mould No.	Part name	Part No.	Cavities Number	Export country
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> Type of mold Prototype Mold <input type="checkbox"/> Production Mold <input type="checkbox"/> Standard (2-plate) <input type="checkbox"/> 3-plate <input type="checkbox"/> Reverser Ejection <input type="checkbox"/> Unscrewing <input type="checkbox"/> Others: <input type="checkbox"/> </div> <div style="width: 30%;"> Mould base Frame <input type="checkbox"/> A B plate steel <input type="checkbox"/> Guide pins <input type="checkbox"/> Family: <input type="checkbox"/> Shrinkage: X <input type="checkbox"/> Y: <input type="checkbox"/> Z: <input type="checkbox"/> Hot runner Supplied by customer <input type="checkbox"/> Supplied by TSD <input type="checkbox"/> Brand: <input type="checkbox"/> Type: <input type="checkbox"/> </div> <div style="width: 30%;"> Molding material S50C 1.1730 <input type="checkbox"/> Local P20 <input type="checkbox"/> Others: <input type="checkbox"/> </div> </div>				
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> Surface finish Medium polish <input type="checkbox"/> High polish <input type="checkbox"/> Mirror polish <input type="checkbox"/> Finish chrome <input type="checkbox"/> Reference EDMN* <input type="checkbox"/> Reference Texture N* <input type="checkbox"/> Others: <input checked="" type="checkbox"/> </div> <div style="width: 30%;"> Steel ABI D2V <input type="checkbox"/> S50C 1.1730 <input type="checkbox"/> P20 1.2738 <input type="checkbox"/> H11 1.2343 <input type="checkbox"/> H13 1.2344 <input type="checkbox"/> 420 1.2083 <input type="checkbox"/> Others: <input type="checkbox"/> </div> <div style="width: 30%;"> Mold warranty Life <input type="checkbox"/> Cycle <input type="checkbox"/> Movement <input type="checkbox"/> Hydraulic cylinder <input type="checkbox"/> Pneumatic cylinder <input type="checkbox"/> Mechanism <input type="checkbox"/> Control / Sensor <input type="checkbox"/> Cylinder Brand <input type="checkbox"/> Control sensor brand <input type="checkbox"/> </div> </div>				
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> Gate Direct Sprue into part <input type="checkbox"/> Edge <input type="checkbox"/> Ring gate <input type="checkbox"/> Fan gate <input type="checkbox"/> Sub gate in part <input type="checkbox"/> Sub gate in pin <input type="checkbox"/> 3-plate pin gate <input type="checkbox"/> Hot runner pin gate <input type="checkbox"/> Hot runner to Cold runner <input type="checkbox"/> Valve gate (Hot runner) <input type="checkbox"/> Others: <input type="checkbox"/> </div> <div style="width: 30%;"> Water Lines Connector Type Brand <input type="checkbox"/> Type <input type="checkbox"/> DME <input type="checkbox"/> Hasco <input type="checkbox"/> Starbitt <input type="checkbox"/> Others: <input type="checkbox"/> </div> <div style="width: 30%;"> Molding machine date Tie bar diameter and distance: <input type="checkbox"/> Max. Daylight: <input type="checkbox"/> Max. thickness of mold: <input type="checkbox"/> Min. thickness of mold: <input type="checkbox"/> Front location ring diameter: <input type="checkbox"/> Back location ring diameter: <input type="checkbox"/> Nozzle radius or flat <input type="checkbox"/> KO screwing type: <input type="checkbox"/> KO holes Diameter: <input type="checkbox"/> KO insert <input type="checkbox"/> Production in TSD <input type="checkbox"/> </div> </div>				
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> Option al Features Graphite-Bronze guiding <input type="checkbox"/> Ball guiding for ejector plate <input type="checkbox"/> Graphite-Bronze wear plate <input type="checkbox"/> Water/oil manifold <input type="checkbox"/> Pressure sensor <input type="checkbox"/> Stop counter <input type="checkbox"/> Runner shut off <input type="checkbox"/> Remark: <input type="text"/> </div> <div style="width: 30%;"> Standard Features TSD <input type="checkbox"/> Custom <input type="checkbox"/> Mold design by <input type="checkbox"/> Resin by <input type="checkbox"/> Inspection by <input type="checkbox"/> </div> <div style="width: 30%;"> Sketch area </div> </div>				

➤ Weekly progress report

Progress Report

Client		Supplier	TSD Mold Industrial Limited	Data Initial	
Drawing NO.		Mould No.	TSD06-122-2-2	Data Updated	
Product name	Übersicht	Prepared by	Kevin Sun	Plan Progress	
				Actual Progress	
				Record Delayed	
				Hold Stop	
				Program Rate	



No.	Description	Date	Aug-12														Sep-12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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➤ Mold trial report

TSD Mold Trial Process Sheet EN ☐

Mold Number: Trial Number: Trial Date:

Customer Name:				Plastic Material:			
Color/Paste Marker:				Machine Type:		Clamping Pressure:	
Part Weight:	g	Gate Weight:	g	Qty:	PCS	Screw Diameter:	mm
Dryer temp:	°C	Dryer time:	h	Semi-Automatic: <input type="checkbox"/> Full-Automatic: <input type="checkbox"/> Robot: <input type="checkbox"/>			
Demolding Method:		Stop: <input type="checkbox"/> Ejector: <input type="checkbox"/>	Tumble: <input type="checkbox"/>	Forward Delay:	s	Backward Delay:	s
Injection Time:	s	Holding Time:	s	Cooling Time:	s	Cycle Time:	s
A Middle Forward Time:	s	A Middle Backward Time:	s	S Middle Forward Time:	s	S Middle Backward Time:	s

Mold Operation Order				Injection Parameter				Material Preparing				Mold temp.	
Order	Pressure	Speed	Position	Order	Pressure	Speed	Position	Order	Pressure	Speed	Position	CAV	°C
Fast close				1				1					
Sec. Fast				2				2					
Slow Close				3				Back Forward					
High Pressure				4				Holding Pressure				Back Pressure	
Slow Open				5				Order	Pressure	Speed	Time		Mpa
Fast Open				6				1					Injection Monitor
Sec. Fast				Ejection Parameter				2					
Sec. Slow				Order	Pressure	Speed	Position	3					

Hydraulic Movement				Holding Back Way				Time				Position			
	Pressure	Speed	Position												
A Forward				1	2	3	4	5	6	7	8				
A Backward				Hopper Temp.								°C			
S Forward				1	2	3	4	5	6	7	8	9	10		
S Backward				Hot runner temp.								°C			

Air Assist	CAV Slow Delay:	s	Blowing Time:	s	Cor Slow Delay:	s	Blowing Time:	s
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Problem Description:				Solution:			

Tried By:

➤ Sample inspection report

TSD Mold Industrial Limited EN ☐

SAMPLE INSPECTION REPORT

Mold No:		Product Name:		DATE-MEASURING		Photo						
Drawing No:		MEASURING TEMPERATURE & RELATIVE HUMIDITY		18-Jun-11								
Date-Testing:		16-Jun-11		°C		%						
Item No.	Dimension	Tolerance MAX MIN	Instrument	Actual Dimension							Judgement	
				CAV1	CAV2	CAV3	CAV4	CAV5	CAV6	CAV7	CAV8	CK

Weight(g):												
1												
2												
3												
4												
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MEASURED BY:	CHECKED BY:	APPROVED BY:	INS TRU MENTS CODE	CM: mm GB gauge block MI: micrometer CP: vernier callipers PF: projector PG: pin gauge DI: depth gauge TM: tool microscope DT: dial gauge WG: height gauge EW: electric weigher TC: turn circle

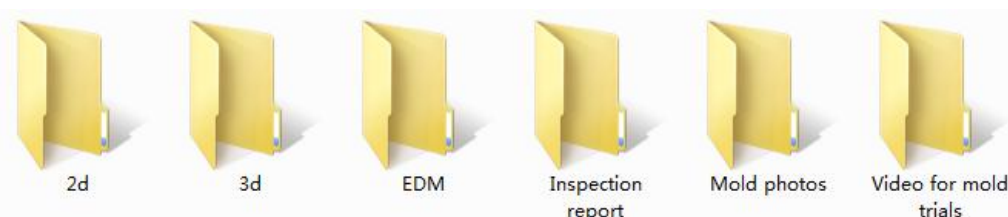
➤ Mold check list (Before tool shipment)

TSD 模具验收单						
模具编号		塑胶材料		钳工		验收日期
分类	序号	检查项目				评判结果
模具外观检查	1	铭牌内容是否打印模具编号、模具重量 (KG)、模具外形尺寸 (mm)，字符高度按设计要求制作，字符清晰、排列整齐。				
	2	铭牌固定在模腿上靠近后模板（离两边各有15mm的距离）且在操作侧，铭牌陷入模脚深度为2mm左右，用四个螺钉固定，固定牢靠，不易脱落。				
	3	冷却水嘴是否有进出标记，进水为IN，出水为OUT，IN、OUT后加顺序号，如INI、OUT1，如有特殊要求，以设计要求为准。				
	4	进出油嘴、进出气嘴是否同冷却水嘴，并在IN、OUT前空一个字符加AIR（气）、OIL（油）。				
	5	水嘴、气嘴及油嘴是否符合图纸型号？				
	6	各模腿是否有零件编号和模具编号？				
	7	模具配件是否影响模具的吊运和存放，如安装时下方有外露的油缸、水嘴、先复位机构等，应有模脚保护。				
	8	支撑腿的安装是否用螺丝穿过支撑腿固定在模架上，或过长的支撑腿车加工外螺纹紧固在模架上。				
	9	浇口直径、喷嘴球半径及喷嘴主流口直径是否按图纸的设计加工？				
	10	安装有方向要求的模具是否在前模板或后模上用箭头标明安装方向，箭头旁应有“TOP”字样，箭头和文字均用喷红色漆处理。				
	11	码模螺丝安装底面是否为平面？				
	12	斜顶是否表面抛光？斜顶底面是否跟内模底面平整或低于底面0.05mm。				
	13	斜顶和滑块的滑动距离是否大于抽芯距2-3 mm？				
	14	耐磨板厚度是否比其对应槽深度高出0.3~0.5mm？				
	15	耐磨板及斜顶是否按要求做油槽？				
	16	行位压条是否具有定位（螺钉或槽型）？				
	17	天侧行位是否具有可靠的行位扣？				
	18	行位底部有顶出时，是否有行程开关保证模具安全？				
冷却部分	1	冷却水道是否符合图纸要求？水量的检测是否达标？				
	2	密封是否可靠，无漏水，易于检修，水嘴安装时缠生料带。				
	3	是否进行了通水试验？进水压力为15Mpa并持续5分钟不漏水。				
	4	密封圈槽位位置是否正确？安装时密封圈不易脱落。				
	5	密封圈安装后，需要确认料料是否复位了（需要红丹验证）。				
	6	隔水片的位置（角度）是否正确？				
	1	浇口室内主流道表面是否抛光达标？				

➤ Mold packaging



➤ Documents packed with mold shipment





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Thank you!