

Zefu Precision Mould  
(Dongguan) Co., Ltd.

ZEFU provides Ultra-Precision  
**(micron level 0.001mm tolerance reachable)** customized  
metallic components for Mold&Die, Medical, Aerospace, Optics,  
Automotive, etc.



Zefu Precision Mould (Dongguan) Co., Ltd.

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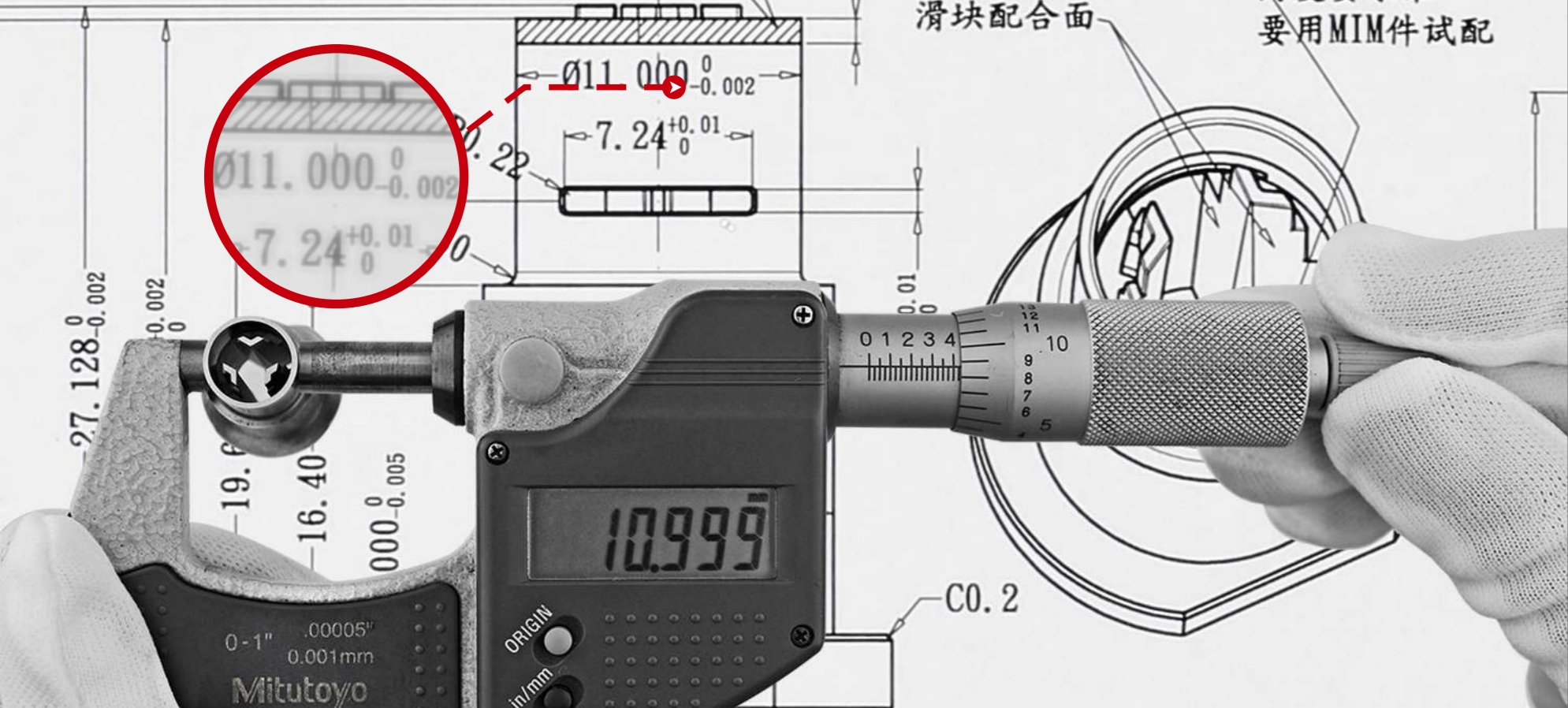
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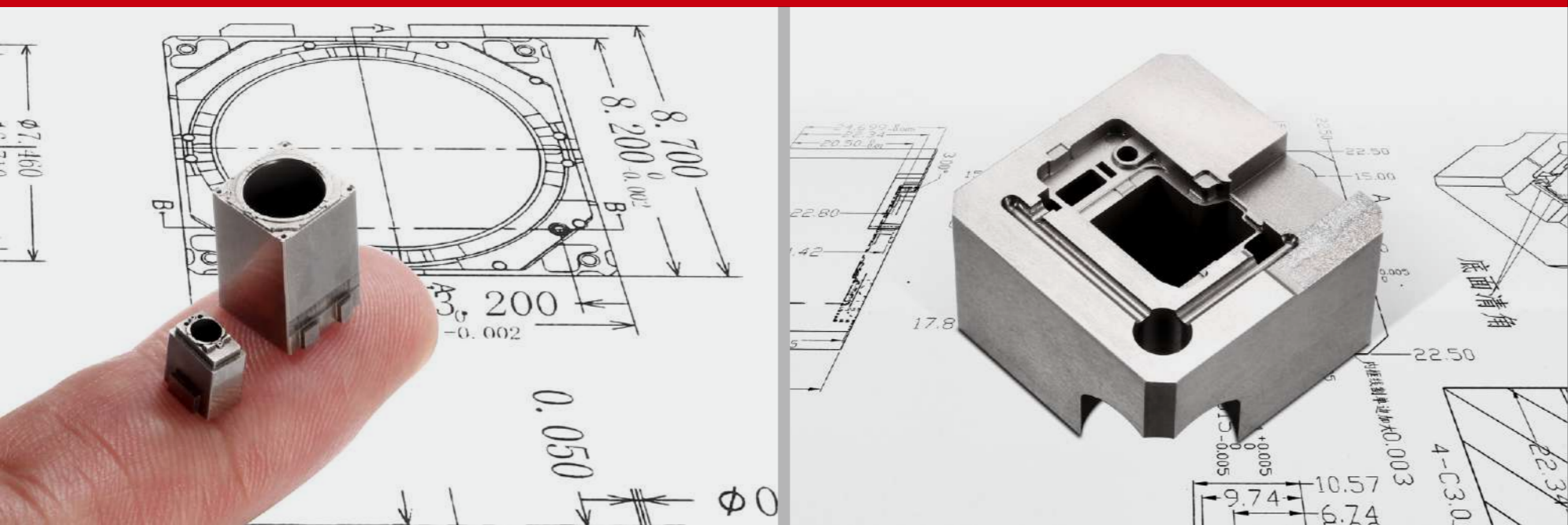
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**ZEFU** 泽富



高精密模具零件 (微米级0.001mm) High precision(micron level 0.001mm)mold components

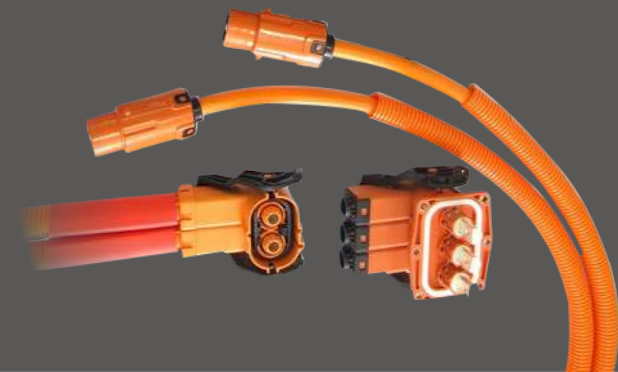


# High Precision Injection Mold

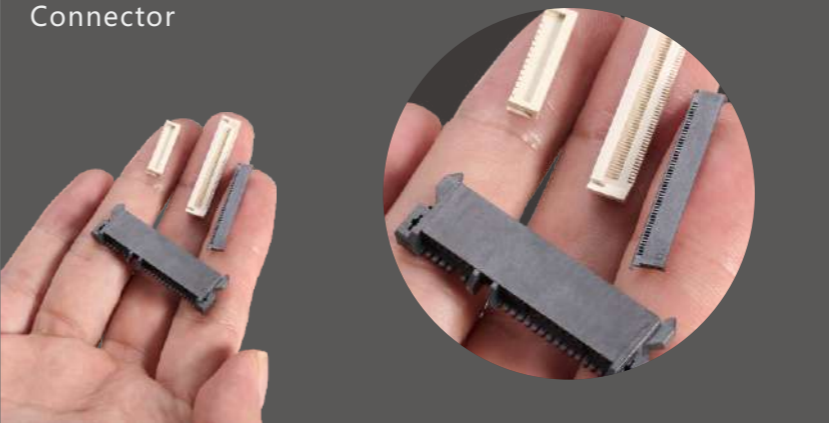
Micro injection and medical products



Auto harness



Connector



liquid silicone rubber





# Company Profile

Found in 2004, Zefu Precision Mold (Dongguan) Co., Ltd is a professional high precision plastic mold components making company. Product refer to: micro-injection mold, medical, liquid silicone rubber, photoelectronics, new emerging energy auto harness, computer, cell phone connector, and so on.

Nowadays, ZeFu is ability to making very tight tolerance components that maybe found to be nearly impossible to achieve. Our grinding precision up to  $\pm 0.001\text{mm}$ , wire cutting precision up to  $\pm 0.002\text{mm}$ , EDM precision up to  $\pm 0.002\text{mm}$ , CNC machining precision up to  $\pm 0.002\text{mm}$ .

With more than 10 year's development, ZeFu obtained ISO9001:2008 Certification in 2012 and translated our precision components making experiences into mold making industrial. ZeFu now has become a reliable manufacturer could provide full service of plastic parts making which cover high precision mold components making, engineering design, plastic injection mold making, molding, second processing and so on.





# CNC Machining

Precision:  $\pm 0.002\text{mm}$



We believe quality is achieved by manufacturing, habit, but not inspection.

## EDM

Precision  $\pm 0.002\text{mm}$

Corner Clearing  $< 0.005\text{mm}$



Sodick AG40/AD30



Mitsubishi EA8PS



Japan DMG MORI NVD4000DCG



Taiwan Dali : MN-860



BeiJing Jingdiao: 400 TE



# Wire Cutting

Precision  $\pm 0.002\text{mm}$  Minimum wire diameter  $< 0.05\text{mm}$



Sodick AQ550/Seibu MM50B



# Grinding Workshop

Precision:  $\pm 0.001\text{mm}$



SGM350/SGM450



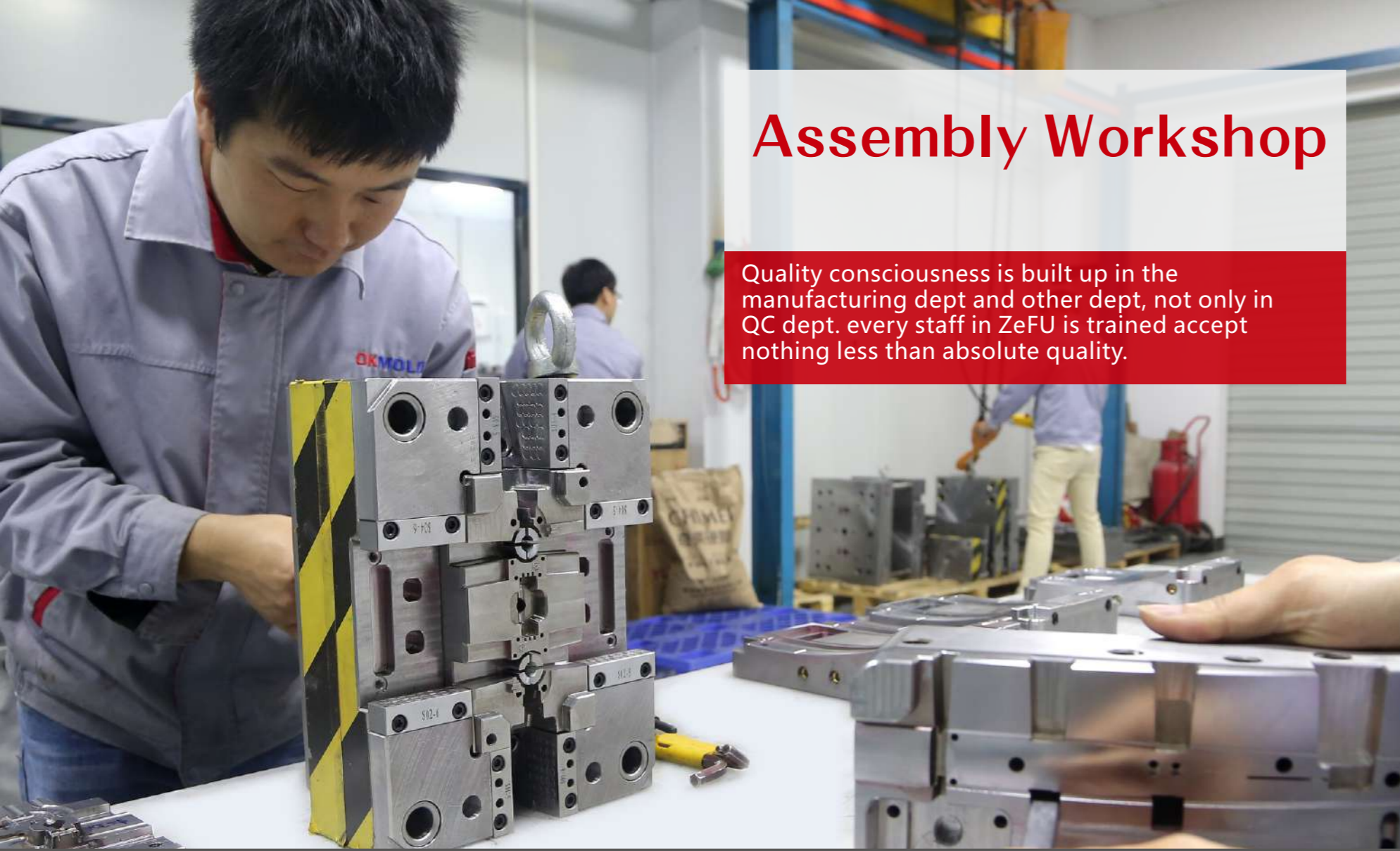
614S

# Digital Lathe

Sigma CNC

Precision  $\pm 0.002-0.003\text{mm}$





## Assembly Workshop

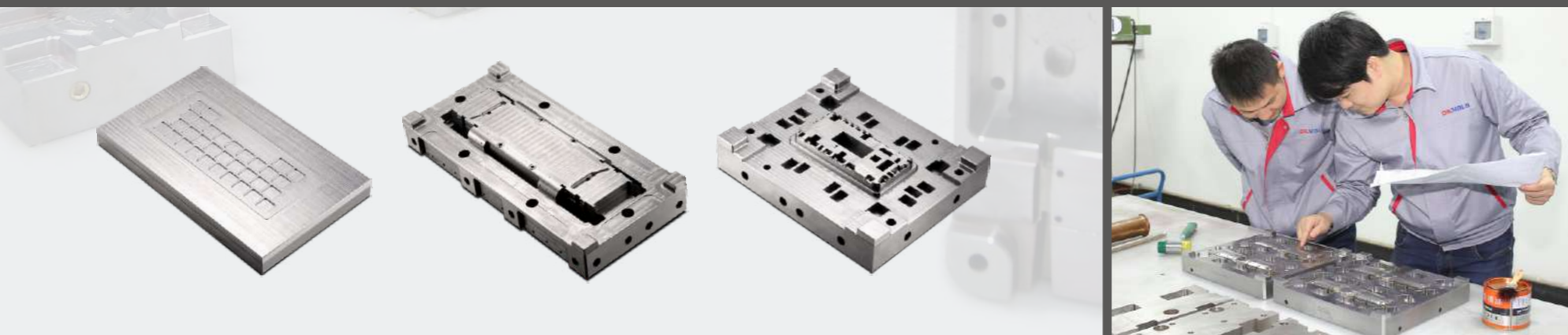
Quality consciousness is built up in the manufacturing dept and other dept, not only in QC dept. every staff in ZeFU is trained accept nothing less than absolute quality.

# Technique Process Management

Measuring equipment is used not only for inspection but also for manufacturing in ZeFU. Sufficient measuring equipments were equipped on beside technician to help them improve their processing precision, quality, habit and quality consciousness also.



We share the experience and lesson learnt to avoid the same issue happen again. Identify the root cause, work out solution and prevention measures. recorded it in manual instruction to achieve





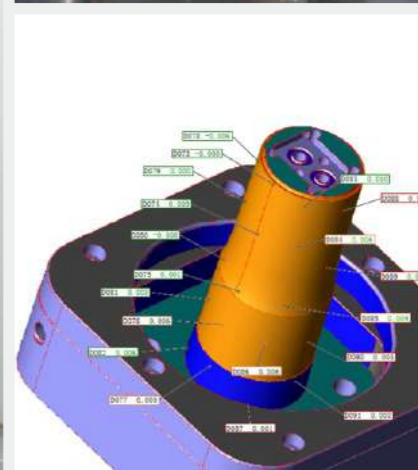
# LK CMM Inspection Machine



ISO 9001&2008

In god we trust, all others bring data

## Inspection Workshop



Precision manufacturing: Strictly inspection  
 Customer satisfaction > 98%  
 Customer complaints ≤ 3T/M  
 Product Qualification Ratio > 99%



No.	Item	Brand	Country of Origin	Machine Park(mm)	Tolorence(mm)	QTY(set)	Remark
1	CNC Machining Center	DMG MORI	Japan	600*400*350	±0.002	1	RMP30000
2	CNC Machining Center	Dali	Taiwan	900*750*500	±0.005	1	RMP15000
3	CNC Machining Center	Jingdiao	China	450*350*250	±0.003	2	RMP36000
4	CNC Machining Center	Demi	China	500*350*250	±0.003	1	RMP36000
5	CNC Machining Center	Demi	China	450*350*200	±0.003	1	RMP36000
6	WEDM	Seibu MM50B	Japan	500*350*280	±0.001	1	Min. line diameter Φ 0.05MM
7	WEDM	Mitsubishi M1200R	Japan	400*320*250	±0.001	1	Min. line diameter Φ 0.1MM
8	EMD	Makino-EDAF2	Japan	320*250*200	±0.001	2	Clearance ≤ 0.01
9	EMD	Mitsubishi EA8PS	Japan	320*250*250	±0.002	3	Clearance ≤ 0.01
10	EMD	Mitsubishi EA8P	Japan	320*250*250	±0.002	3	Clearance ≤ 0.01
11	Grinding Machine	Yuqing	Taiwan	350*200*250	±0.001	12	Clearance ≤ 0.01
12	Digital Lathe	Sigma	Taiwan	250*500	±0.005	3	Max. diameter Φ 150MM
13	Milling	QuickJet	Taiwan	1000*450*550	±0.05	4	
14	CMM	LK Integra	UK	850*700*600	1.8+L/325	1	
15	Microscope	Mitutoyo	Japan	300*170*220	0.001	2	
16	Microscope	Nikon	Japan	150*100	0.001	2	
17	Microscope	Nikon	Japan	250*150	0.001	1	
18	Microscope	Nikon	Japan	300*200	0.001	1	
19	Projector	Nikon	Japan	150*100*150	0.001	3	
19	Projector	Nikon	Japan	150*100*150	0.001	3	
20	2.5次元 2.5 VMS	Mitutoyo	Japan	300*200*220	0.001	1	
21	Height Master	TESA	Switzerland	400	0.001	1	
22	Height Master	TESA	Switzerland	600	0.001	1	
23	Height Master	TESA	Switzerland	800	0.001	1	
24	Height Master	Nikon	Japan	0-100mm	0.001	10	
25	Height Master	Nikon	Japan	0-150mm	0.001	5	

# Major Equipment-List

## Our Honorific Customer

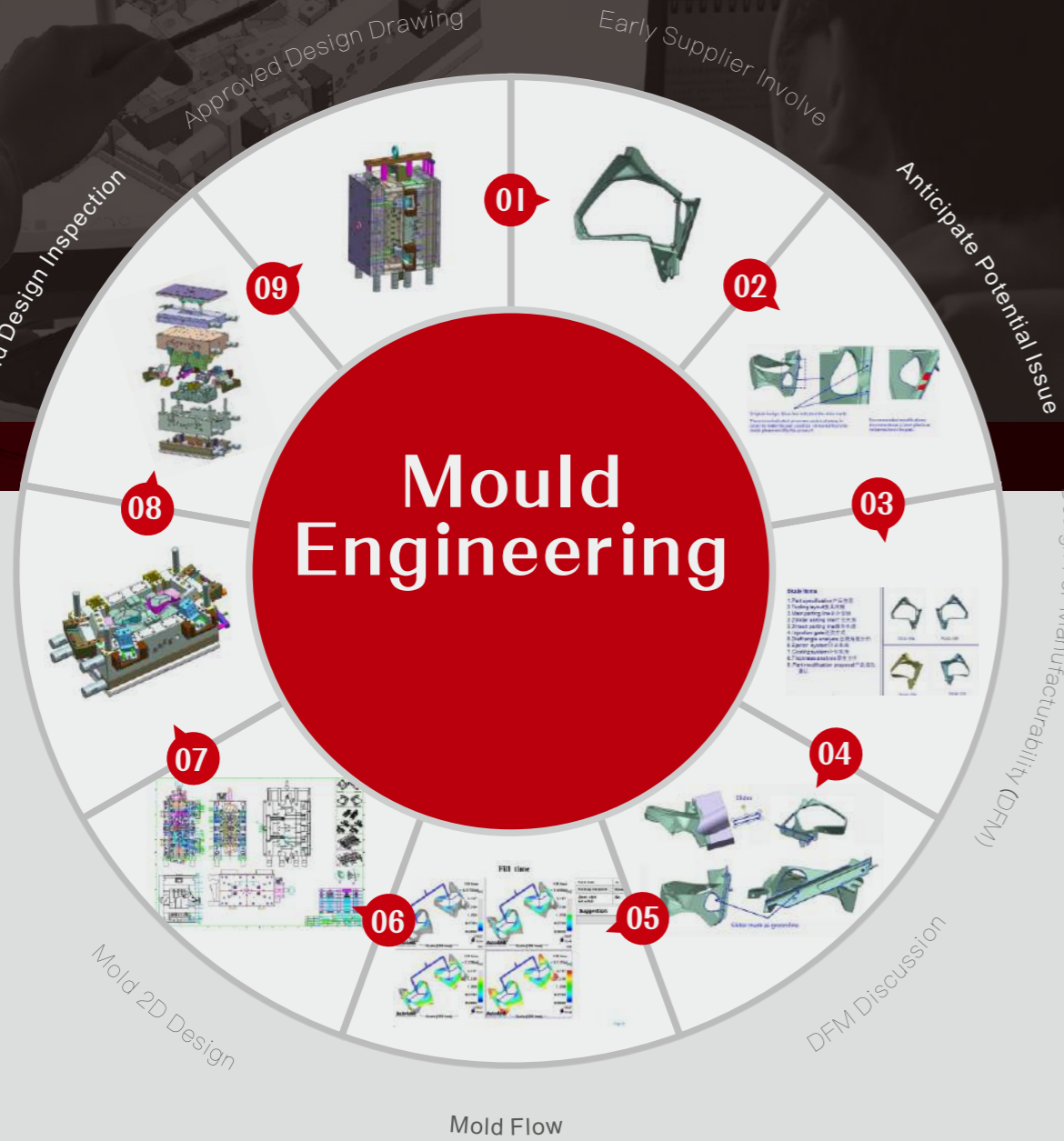
Fortune 500 brand qualified supplier





Keep study, love challenge and strong background engineers team (some of engineers have more than 20 years design and build experiences) give us the ability to anticipate potential problems before they even arise and find creative solution for the most challenging design manufacturing problems.

# Project Management



**Mold Design Review Meeting Minutes**  
模具设计评审会议记录

Prepared by:	M. Huang	Date:	
Subject:	Mold Design Review	Address:	customer company co., Ltd
Meeting time:		Participants:	Simon, Li, Eric, Andrew, M. Chan, M. L. Andy Huang, customer company co., Ltd
Participants:		Absence:	NO

Item	Issue	Action	Owner	Due Date	Status	Remark
1	Background information	This is 1st mold design meeting for preliminary mold design. We have to finish the mold design and submit it to customer for approval on 17 Nov Meeting Exact time.	M. Chan	2010/11/17	Done	
2	Confidential	Yes	customer company co., Ltd	NA	Done	
3	Pump Reaction	1. Breakdown confirm to be 1:1000 2. The tool can be fit by 80 Tons 3. There is no need 2.1. Cooling water flow for this tool and add one cooling circuit for optic and runner. 4. Add water code for the four cavity inserts. 5. Check all dimension in the drawing, make sure all fit for all CTP dimension. 6. Check that the dia. of cooling line has to be 8 mm. 7. ensure the mold opening and ejection is operable. 8. ensure the moldflow is suitable for the part and ensure the moldflow is suitable for machine.	M. Huang	2010/11/17	Done	

01 Mold design review meeting minutes



02 Progress report

**Injection Trial Data**  
注塑工艺参数表

Customer / 顾客	Information of Product / 产品信息		
Part Name / 产品名称	0		
Part Number / 产品编号	0		
Material / 材料	Material Code / 材料编号	Product Weight (g) / 产品重量	Resin Weight (g) / 树脂重量
ABS	GP22	20	5.5

Injection Machine Model Name & No. / 注塑机名称、型号	HTF1607
Maximum Clamping Force (Tons) / 最大锁模力	160
Maximum Inj. Pressure (MPa) / 最大注射压力	170
Stroke (mm) / 行程	45
Maximum Inj. Capacity (cm <sup>3</sup> ) / 最大注射容量	500

Injection Machine Model / 注塑机型号	HTF1607
Clamping Force (Ton) / 锁模力	160
Cycle Time (Sec) / 成型周期	40

Take out sample by hand / 用手取出样品	OK
Take out sample by hand / 用手取出样品	OK
Take out sample by hand / 用手取出样品	OK

Fill Time / 填充时间	Packing / 注塑量	Charges / 注塑量	Charges / 注塑量	Charges / 注塑量
5.5	5	5	5	5

03 Injection trial data

**OKMOLD 试模产品尺寸报告**  
Dimensional Evaluation Data Reporting Sheet

Dimensional (mm)	Symbol	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value	Value
2.00	±0.05	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

04 Dimensional evaluation data reporting sheet

**Tooling Issue Tracker 模具修改跟进报告**

No.	Issue	Action
1	shrinkage mark on the opposite of boss	remove plastic like a crater on the boss

Project Name	Part No.	Part Name	CAVE	Trial status	Trial Date	Next Trial Date

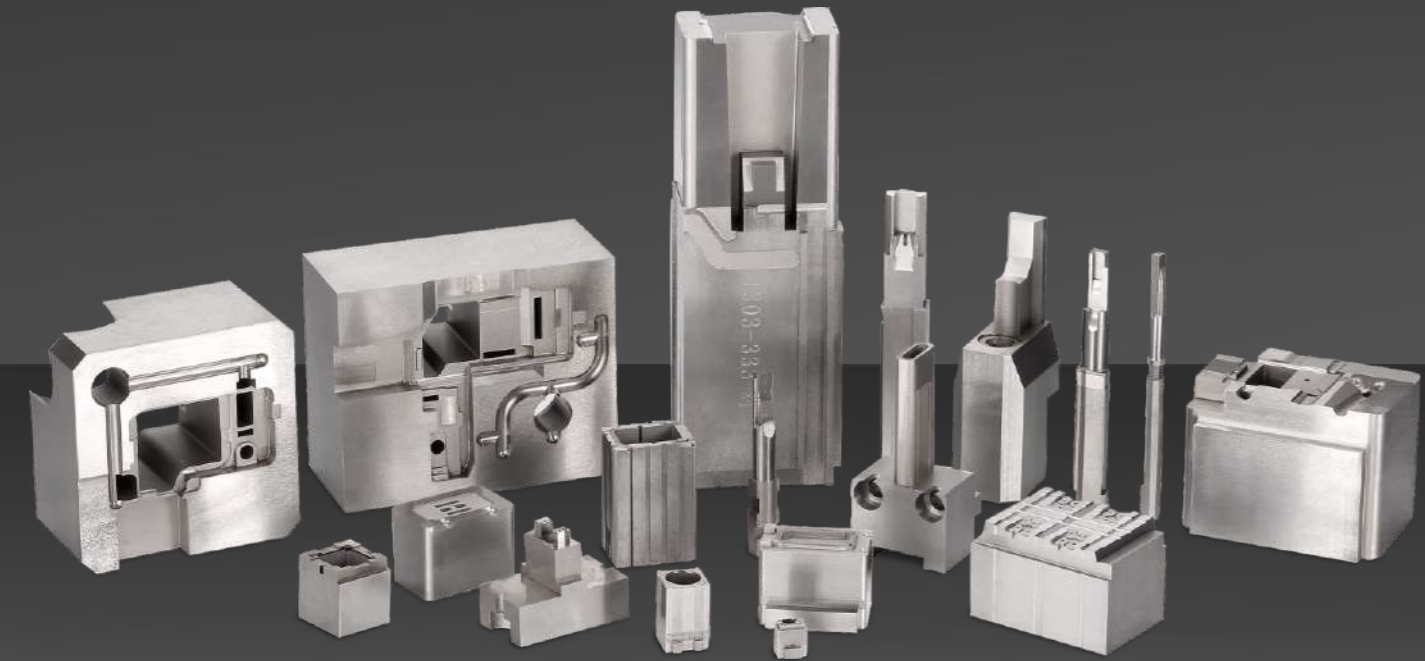
05 Tooling issue tracker

**OKMOLD 模具制造核对表**  
Tooling Manufacturing Checking List

Part Name / 零件名称	Part No. / 零件编号	Customer / 顾客	Project / 项目

1. Check the drawing / 检查图纸	OK
2. Check the material / 检查材料	OK
3. Check the machine / 检查机器	OK
4. Check the mold / 检查模具	OK
5. Check the production / 检查生产	OK
6. Check the quality / 检查质量	OK
7. Check the delivery / 检查交货	OK
8. Check the cost / 检查成本	OK
9. Check the customer / 检查客户	OK
10. Check the factory / 检查工厂	OK

06 Tooling manufacturing checking list



**Mold Components & Insert**



## High Precision Plastic Parts



# Why Choose Us?

01

(0.001mm)  
Micro level precision

Zefu focusing on high precision and particularly complex process plastic mold components making, is ability to making very tight tolerance components that may be found to be nearly impossible to achieve.

Our depth of experience in extremely high precision (0.001mm) mold component and plastic mold allow us to tackle the toughest precision challenges facing our customers.

02

Cost saving, quality insure

Years design, build and molding experience, make us further concern about the later mass production easier, cheaper and consistently. Our

- customers could always saving cost from scrap rate reduction and longer service time:

Weld-free mold, mold-in stress relief mold and creative mold solution...etc provide by Zefu could greatly improved the molding quality and reduce scrap rate for customers.

- ZeFu is proud of our actually mold life times is always exceed expectation.

03

Quick response and execute in ZeFu: eliminate time waste and save time for customer.

Problem is always be solved on it happening, as everyone in ZeFu is the "go to" guy and deeply understand time is money. Our customer could be always benefit from it for let his project ahead his schedule. Product time-to-market was insured.

04

Advanced and creative design solution.

Creating an atmosphere of keep study, love challenge and continuous improvement. Whenever there is a new mold technology, ZeFu guys is initiative to learn it. We have command with the state-of-art mold technology Such as: micron injection mold, mold-in stress relief molding and creative molding solution...etc.

Keep study and impacted by new design solution, willing to try, let us have the ability to provide the leading edge mold technology and creative mold solution for our customers.