



SHANGYOU  
| 上 | 优 | 刀 | 具 |

ZHEJIANG SHANGYOU TOOLS CO., LTD.

浙江上优刀具有限公司  
ZHEJIANG SHANGYOU TOOLS CO., LTD.

地 址：浙江省温岭市东部新区25街9号  
销售部：0576-86997666 86997660 86960588  
技术部：0576-86983088 ( 插、剃齿刀 )  
0576-86960678 ( 滚刀 )  
传 真：0576-86985688

ADD: No.9, 25# street, East Industry Center, Wenling City,  
Zhejiang, 317500, P.R.China.  
Website: [www.shangyoutools.com](http://www.shangyoutools.com)  
Email: [sales@shangyoutools.com](mailto:sales@shangyoutools.com)  
[cici@shangyoutools.com](mailto:cici@shangyoutools.com)  
Sales: 0086-15888638012 / 18968591118  
Fax: 0086-576-86985688



浙江上优刀具有限公司  
ZHEJIANG SHANGYOU TOOLS CO., LTD.



浙江上优刀具有限公司创立于2009年4月，是一家专业生产合金 / 高速钢齿轮滚刀、车齿刀、插齿刀、剃齿刀的高新技术企业，为客户提供专业的车齿加工及整体齿轮解决方案。

#### 自主研发 替代进口

上优重新创新，致力于设计研发高精齿轮刀具，加大科技研发和硬件装备投入，实现进口替代。取得国内外专利30多项，属省专利示范企业。

#### 质量第一

上优重品质，选用国际高标准原材料，配备德国、瑞士先进的生产设备以及KLINGELNBERG、ZOLLER等全球权威检测设备，确保产品质量。

#### 修磨与服务

上优以服务客户为原则，在全国开设多家刀具服务分公司，联合瑞士欧康·巴尔查斯，为客户提供技术、现场运用及修磨、涂层服务。

#### 上优荣誉

公司通过GB/T24001-2016 idt ISO14001:2015环境管理体系认证、GB/T19001-2016 idt ISO9001:2015质量管理体系认证、GB/T45001-2020 idt ISO45001:2018职业健康安全管理体系认证。属国家高新技术企业、荣获浙江省守合同重信用“AA”级单位、浙江省专精特新中小企业称号，曾主导起草浙江制造《齿轮滚刀》团体标准并通过浙江制造认证。

## 企业简介

### ENTERPRISE INTRODUCTION

Zhejiang Shangyou Tools Co., Ltd was founded in April 2009, an high-tech enterprise specializing in production of Carbide/High speed steel gear cutter hobs, power skiving, shaper, and shaving cutters, along with providing professional gear power skiving processing and overall gear solution services.

#### Independent research and development replaces imported tools

SHANGYOU pays attention to innovation and committed to the design and development of high-precision gear cutters. It has put more efforts in research and development of science and technology and as well as the investment of hardware equipment so that the products can finally replace the imported ones. It has obtained more than 30 patents at home and abroad and it belongs to a provincial-level patent demonstration enterprise.

#### Quality Comes First

SHANGYOU emphasizes on quality. It selects internationally high-standard raw materials and equipped with advanced production equipment from Germany and Switzerland as well as globally authoritative testing equipment, such as KLINGELNBERG and ZOLLER.

#### Re-grinding & Service

SHANGYOU adhere to the principle of providing better customer services. It has set up several branch companies for tool services in China and has provided customers with technology, field application, re-grinding and coating services in combination with Switzerland Oerlikon Balzers.

#### Honors and Awards

SHANGYOU has passed GB/T24001-2016 idt ISO14001:2015 Environmental Management System Certification, GB/T19001-2016 idt ISO9001:2015 Quality Management System Certification, GB/T45001-2020 idt ISO45001:2018 Occupational Health and Safety Management System Certification. We are national high-tech enterprise, has been awarded the "AA" level unit for abiding by contracts and being trustworthy by Zhejiang Province, and holds the title of "Zhejiang Specialized, Skilled, Innovative and High-Quality Small and Medium-sized Enterprise". It has also led the drafting of the Zhejiang Manufacturing "Gear Rolling Cutter" group standard and passed the Zhejiang Manufacturing certification.



诚信：我们诚实、守信、热情、积极主动的对待每一个客户和员工。

INTEGRITY: We are honest, trustworthy, enthusiastic, proactive treatment of each customer and employees.

卓越：不断完善自我，确保本行业内领先地位，并与国际先进同行同步发展。

EXCELLENCE: Constant self-perfection, ensure the leading position in the domestic industry and develop in tandem with advanced international peers.

服务：为满足客户和员工的需要，我们提供全方位的服务。

SERVICES: In order to meet the needs of customers and employees, we provide a full range of services.

发展：通过彼此合作，实现你、我、他的共同发展。

DEVELOPMENT: Through mutual cooperation, realize the common development of you, me and him.





ZHEJIANG  
SHANGYOU TOOLS  
CO.,LTD.

SHANGYOU  
| 上 | 优 | 刀 | 具 |



#### 规格范围

#### SPECIFICATION RANGE

|                          |                       |
|--------------------------|-----------------------|
| 滚刀 HOB                   | Module 0.1 ~Module 28 |
| 车齿刀 POWER SKIVING CUTTER | Module 0.2 ~Module 8  |
| 插齿刀 GEAR SHAPER CUTTER   | Module 0.1 ~Module 25 |
| 剃齿刀 SHAVING CUTTER       | Module 1 ~Module 6    |

#### 材料

#### MATERIAL

|      |           |                                                |
|------|-----------|------------------------------------------------|
| 高速钢  | HSS<br>PM | M2 M2AL M35 M42<br>S390 ASP2052 HP8 HP10<br>CB |
| 硬质合金 | CARBIDE   |                                                |

#### 精度等级

#### ACCURACY GRADE

|     |     |    |       |
|-----|-----|----|-------|
| DIN | AAA | AA | Grade |
| GB  | AAA | AA | Grade |

#### 热处理

#### HEAT TREATMENT

热处理工艺是产品加工的重要组成部分，公司采用德国先进技术和工艺，设备采用磁调变压器和PIN温控技术，精确控制各项参数，确保热处理后产品硬度均衡，有较高的硬度、红硬性和韧性。

Heat treatment process plays an important role in product processing. We adopts advanced German technologies and processes, the equipment uses magnetic transformer and PIN temperature control technology to precisely control various parameters, ensuring the balanced hardness of the processed products, with high hardness, red hardness and toughness.

#### 涂层

#### COATING

|                                                       |
|-------------------------------------------------------|
| 欧瑞康·巴尔查斯 Oerlikon Balzers                             |
| Type: TIN Future Nano ALCRONA PRO ALTENSA ALCRONA EVO |

● 汽车行业 AUTO INDUSTRY



爱汽科技



长城汽车  
Great Wall Motors

长城汽车



东风汽车

东风二汽



thyssenkrupp

帝森克虏伯



福达



恒隆集团  
HENG LONG

湖北恒隆



吉利汽车



巨跃



科普菲尔



蓝黛科技



普曼普



钱江摩托



双环



上汽奥



天津海



威世特



中国重汽



中马

● 工程机械  
ENGINEERING  
MACHINERY



宁波东力



SANY

三一重工



德力佳

德力佳



南高齿



远景能源



重齿机械

● 风力发电  
WIND POWER  
INDUSTRY

● 铁路航空

RAIL&AIR INDUSTRY



中国航发

航发



西飞



中车

# CONTENTS

## 目录

SHANGYOU  
SHANGYOU

### 滚刀系列 HOB SERIES

|                                           |    |
|-------------------------------------------|----|
| 齿轮滚刀 GEAR HOB .....                       | 16 |
| 热后硬滚刀 AFTER HEAT-TREATMENT GEAR HOB ..... | 18 |
| 异形滚刀 SPECIAL TOOTH PROFILE HOB .....      | 20 |
| 蜗轮滚刀 WORM GEAR HOB .....                  | 22 |
| 齿条滚刀 RACK GEAR HOB .....                  | 23 |
| 成型铣刀 FORMED MILLING CUTTER .....          | 23 |



### 插齿刀系列

#### SHAPER CUTTER SERIES

|                                                 |    |
|-------------------------------------------------|----|
| 齿轮插齿刀 SHAPER CUTTER .....                       | 26 |
| 异形插齿刀 SPECIAL TOOTH PROFILE SHAPER CUTTER ..... | 28 |

### 剃齿刀系列

#### SHAVING CUTTER SERIES

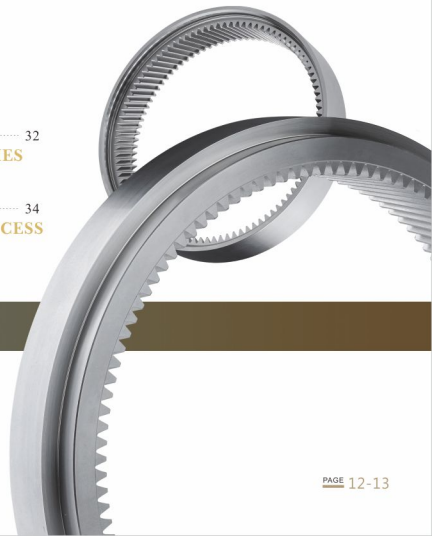
|                                   |    |
|-----------------------------------|----|
| 轴向剃齿刀 AXIAL SHAVING CUTTER .....  | 30 |
| 径向剃齿刀 PLUNGE SHAVING CUTTER ..... | 31 |

### 车齿刀系列 .....

#### POWER SKIVING SERIES

### 车齿加工 .....

#### POWER SKIVING PROCESS





ZHEJIANG  
SHANGYOU TOOLS  
CO.,LTD.

SHANGYOU  
叶任牌 | 工 | 具 | 刀 | 具 |

## 滚刀系列 HOB SERIES

## 齿轮滚刀 GEAR HOB

范围：标准滚刀、小模数滚刀、磨前滚刀、  
剃前滚刀、珩前滚刀、刮前滚刀等

模数：0.1~28

材料：进口粉末高速钢、硬质合金

精度：AAA、AA、A(DIN3968)

优势：

- 更长寿命、更高效率、更高精度
- 可实现齿形精确修形（修缘、鼓形、K形齿等）

Rang: Standard hobs, Small module hobs,  
Pre-grinding hobs, Pre-shaving hobs,  
Pre-honing hobs, Pre-skiving hobs  
Module range: 0.1-28  
Material: PM, HSS, Carbide  
Accuracy: AAA, AA, A(DIN3968)

Advantage:

- Longer service life, higher working-efficiency, higher accuracy
- Achieve precise tooth profile modification (Chamfer, Drum-tooth, K-shaped teeth, etc.)



## ● 热后硬滚刀

### AFTER HEAT-TREATMENT GEAR HOB

模数: 0.1-6

材料: 硬质合金

精度: AAA、AA(DIN3968)

优势:

- 可代替磨削困难的工件
- 加工精度达4-5级
- 可实现齿形精确修形 (修缘、鼓形、K形齿等)

Module range: 0.1-6

Material: Carbide

Accuracy: AAA, AA(DIN3968)

Advantage:

- Replaceable for difficult work-piece grinding
- Processing accuracy can reach to 4-5 class
- Achieve precise tooth profile modification (Chamfer, Drum-tooth, K-shaped teeth, etc.)



## ● 异形滚刀

### SPECIAL TOOTH PROFILE HOB

范围：矩形花键滚刀、三角花键滚刀、  
链轮滚刀、同步带轮滚刀、谐波滚刀、  
阴阳转子滚刀等

材料：进口粉末高速钢、硬质合金

精度：AAA、AA、A

- 精确设计各种异形刀具
- 精密检测



Rang: Rectangular spline hobs, Triangular spline hobs,  
Synchronous pulley hobs, Sprocket hobs, Harmonic  
hobs, Male and female rotor hobs, etc

Material: PM, HSS, Carbide  
Accuracy: AAA, AA, A

- Precisely design various special-shaped  
cutting tools
- Precisely inspection





## ● 蜗轮滚刀 WORM GEAR HOB

范围: ZA ZI ZK ZN ZC型

模数: 0.5-25

材料: 进口粉末高速钢

精度: AA, A

- 多头、大螺旋角设计、制造
- 精密检测

Range: ZA ZI ZK ZN ZC Type

Module range: 0.5-25

Material: PM, HSS

Accuracy: AA, A

- Design and product for multi-threads, big helix angle
- Precisely inspection



单基米德滚刀 (ZA)  
轴向往复直线



单开线滚刀 (ZI)  
轴向往复螺旋线



法向齿面滚刀 (ZN)  
法向往复螺旋线



螺旋齿面滚刀 (ZK)  
螺旋齿面螺旋线



## ● 齿条滚刀 RACK GEAR HOB

范围: 工业、汽车转向器、自动化生产线齿条等

模数: 0.5-28

材料: 进口粉末高速钢

精度: AA, A

- 更长寿命、更高效率、更高精度
- 精密检测

Range: Industrial, automotive steering gears,

automated production line racks, etc

Module range: 0.5-28

Material: PM, HSS

Accuracy: AA, A

- Longer service life, higher working-efficiency, higher accuracy
- Precisely inspection

## ● 成型铣刀 FORMED MILLING CUTTER

范围: 工件渐开线、直线、异形轮廓等

材料: 硬质合金、粉末高速钢

精度: AA, A

- 更长寿命、更高效率、更高精度
- 精密检测

Range: Involutes, Straight lines, Irregular contours

work-piece, etc

Material: Carbide, HSS

Accuracy: AA, A

- Longer service life, higher working-efficiency, higher accuracy
- Precisely inspection





ZHEJIANG  
SHANGYOU TOOLS  
CO.,LTD.

SHANGYOU  
| 上 | 优 | 工 | 具 | 有 | 限 | 公 | 司 |



插齿刀系列  
SHAPER CUTTER SERIES

## 插齿刀系列

### SHAPER CUTTER SERIES

范围：盘形、碗形、锥柄直齿、斜齿插齿刀、  
标准齿形、倒角齿形、瘤头+倒角齿形

模数：0.1~25

材料：进口粉末高速钢、硬质合金

精度：AA、A

优势：

- 反复精心设计
- 瑞士、德国高精插刀磨床精磨磨齿
- 德国克林贝格精密检测
- 德国热处理工艺，刀具寿命高

Range: Bowl-type, Disk-type, Straight shank-type,  
Helical gear-shaper cutter, Standard tooth profile,  
Chamfered tooth profile, Protuberance chamfer  
tooth profile.

Module range: 0.1-25

Material: PM, HSS, Carbide

Accuracy: AA, A

Advantage:

- Repeated and meticulous design
- Swiss and German high-precision tool grinding  
machines for precise tooth grinding
- Germany Klingberg Precisely inspection
- German heat treatment process, longer service life

## • 齿轮插齿刀

### SHAPER CUTTER

## 插齿刀系列 SHAPER CUTTER SERIES

范围：并齿、去齿、不等齿厚；双段齿形；矩形、三角花键；滚子、齿形链轮、同步带轮、圆弧齿插齿刀、谐波插齿刀

模数：0.1起

材料：进口粉末高速钢、硬质合金

优势：

- 精心计算和设计
- 高精度加工及精密检测
- 提高加工效率
- 刀具寿命长

Range: Merged teeth, Missing teeth, Unequal tooth thickness shaper cutters; Double-segment tooth profile shaper cutters; Rectangulars, Triangular spline shaper cutters; Rotors, Sprockets, Belt, arc tooth, Harmonic gear shaper cutters.

Module range: start from M0.1

Material: PM, HSS, Carbide

Advantage:

- Elaborately calculated and designed
- High-precision processing and precisely inspection
- Improve processing efficiency
- Longer service life



异形插齿刀

SPECIAL TOOTH PROFILE SHAPER CUTTER



ZHEJIANG  
SHANGYOU TOOLS  
CO.,LTD.

## 剃齿刀系列 SHAVING CUTTER SERIES

- 采用法向梳槽使刀具使用寿命更高
- Longer service life to the adoption of normal comb grooves

### ■ 轴向剃齿刀

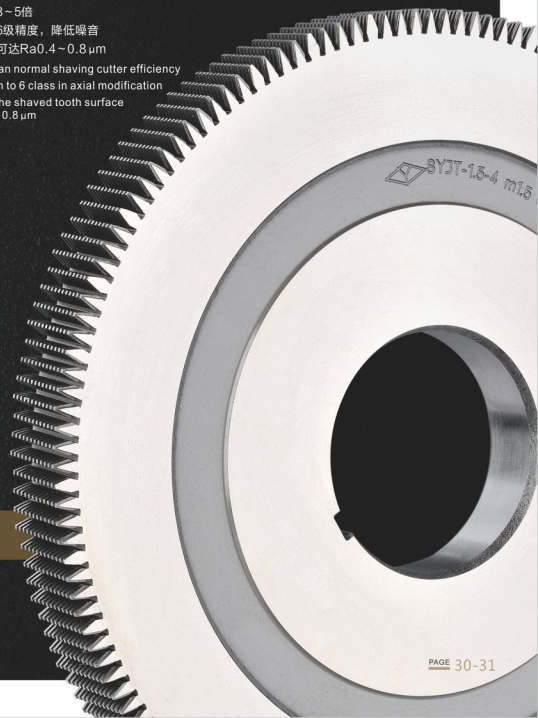
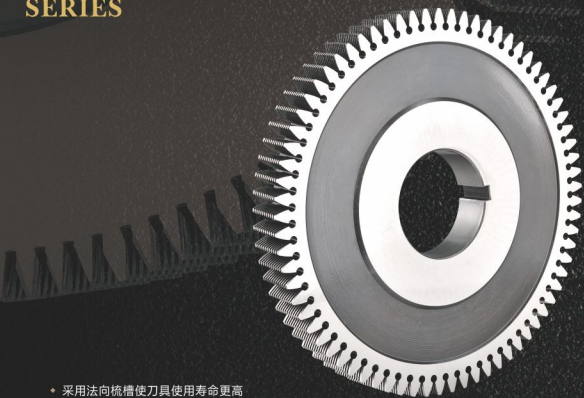
## AXIAL SHAVING CUTTER

SHANTOYOU  
DICEW | 工 | 齿 | 剃 | 刀 | 机 |

### ■ 径向剃齿刀

## PLUNGE SHAVING CUTTER

- 效率是传统剃齿的3~5倍
- 齿形齿向修形可达6级精度，降低噪音
- 被剃齿齿面粗糙度可达Ra0.4~0.8 μm
- 3-5 times higher than normal shaving cutter efficiency
- Accuracy can reach to 6 class in axial modification
- The roughness of the shaved tooth surface can reach Ra0.4 to 0.8 μm





ZHEJIANG  
SHANGYOU TOOLS  
CO.,LTD.

## 车齿刀系列 POWER SKIVING SERIES

范围：齿轮类：模数0.2-8的内外斜齿轮、直齿轮  
各种异形齿：圆弧、花键、链轮、带轮、谐波  
材料：进口粉末高速钢、硬质合金  
精度：AAA、AA

### 优势：

- 车齿刀可按圆锥形车齿刀、圆柱形车齿刀设计、制造
- 精心计算，避免干涉
- 满足各类中鼓、修缘、K形齿形要求
- 刀具精度高，寿命长

Range: Gears: Internal and external helical gears and spur gears with modules ranging from 0.2 to 8

Special tooth profile: Arc, spline, sprocket, pulley, harmonic

Material: PM, HSS, Carbide

Accuracy: AAA, AA

### Advantage:

- Design and produce based on cone shape and cylindrical power skiving cutter
- Elaborately calculation, avoid interference
- Meet the requirements of various medium drum, chamfer and K-shaped tooth profiles
- High accuracy and high service life





## 车齿加工

### POWER SKIVING PROCESS

范围：模数0.2~6的内外斜齿轮、直齿轮车  
齿加工、异形齿车齿加工

切削高度：120mm

最大外圆：φ600

优势：

- 可使用圆锥刀具及圆柱刀具加工
- 对齿加工、淬硬齿轮重复对齿加工
- 可使用硬质合金刀具高效加工
- 齿轮精度达5~6级

Range: Processing for helical and spur gears with  
modules ranging from 0.2 to 6, as well as  
special-shaped gears

Cutting height: 120mm

Max OD: φ600

Advantage:

- Processing with Cone shape and cylindrical power skiving cutter
- Gear alignment processing, repeated gear alignment processing  
of hardened gears
- Carbide cutting tools will be used for efficient processing
- The gear accuracy reach to 5-6 class





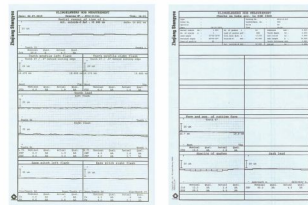
ZHEJIANG  
SHANGYOU TOOLS  
CO.,LTD.

SHANGYOU  
叶任牌 上 优 刀 具



车齿加工

POWER SKIVING PROCESS



SHANTOU  
| 上 | 海 | 万 | 里 |

ZHEJIANG  
SHANGYOU TOOLS  
CO.,LTD.

**检测设备**  
**TESTING FACILITY**



ZHEJIANG  
SHANGYOU TOOLS  
CO.,LTD.

## 专利证书



上优人将继承“质量第一、客户第一、服务第一”的宗旨，坚持“品牌同创、利益共享”的经营理念，与新老客户携手并进，共创美好明天。

We will continue to uphold the purpose of "Quality First, Customer First, Service First", and adhered to the philosophy that "Creat brand together, benefit sharing", welcome you together for a better tomorrow.



Honored "BEST SUPPLIER" by  
Zhejiang Shangshan transmission  
machinery co.,LTD

## PATENT CERTIFICATES



ZHEJIANG  
SHANGYOU TOOLS  
CO.,LTD.



SHANTOYOU  
| 上 | 优 | 刀 | 具 |



balzers 欧瑞康·巴尔查斯

**济南** 公司名称: 济南新上优刀具销售服务有限公司  
联系电话: 15355779666/13808922802  
传真: 0531-88025067  
邮箱地址: 15355779666@163.com  
地址: 山东省济南市高新区温泉水路18号(纸浆厂院内)

**常州** 公司名称: 新上优(常州)刀具销售有限公司  
联系电话: 18151997111/13666489218  
传真: 0519-83211899  
邮箱地址: changzhou@shangyoutools.com  
地址: 江苏省常州市武进区湖塘镇凌道路28号

**重庆** 公司名称: 重庆新上优刀具销售服务有限公司  
联系电话: 023-41436629/13983461679  
传真: 023-67840200  
邮箱地址: cqsylgw@163.com  
地址: 重庆市璧山区璧泉街道福顺大道1号1幢

**天津** 公司名称: 天津新上优刀具技术服务有限公司  
联系电话: 022-68555369/13821203180/13011301072  
传真: 022-68555705  
邮箱地址: wangbjx@163.com  
地址: 天津市静海经济开发区金海道5号孵化器科研楼一楼

**荆州** 公司名称: 荆州新上优刀具销售服务有限公司  
联系电话: 18171988107  
传真: 0716-8808288  
邮箱地址: 18972359188@163.com  
地址: 湖北省荆州市沙市区开发区联合街道月堤北路11-16号

**杭州** 公司名称: 杭州德益工具有限公司  
联系电话: 13819100555  
传真: 0571-88583189  
邮箱地址: 13819100555@139.com  
地址: 浙江省杭州市余杭区塘栖镇东小河街7号10幢203室



上优刀具全国修磨服务中心站点  
SHANGYOU TOOLS RE-GRINDING SERVICE CENTER IN CHINA



创新至上 优品领航  
INNOVATION FIRST, QUALITY LEADS