SUNSKY



阳天机械工业有限公司

SUNSKY MACHINERY INDUSTRY CO.,LTD.

阳天·多工位冷镦成型机
SUNSKY
MULTI-STATION COLD UPSETTING FORMERS





企业简介

安徽阳天机械工业有限公司坐落在风景秀丽的皖南名城宁国市。宁国是一个具有深厚文化底蕴的新兴工业城市，城市四周众多名城，名山，如诗如画的名胜古迹簇拥，加之交通便利，依托上海，宁国已经成为中国现代制造业的生产基地！

阳天的整个研发和制造团队，本着“惟严，惟实”的工匠精神，精心打造好每一台多工位冷镦成型机。这支团队的基本骨干都是中国大陆首批自主设计制造多工位冷镦成型机的开拓者，在过去的十几年里，该团队先后与国内数家公司进行过合作，共同生产制造多工位冷镦成型机，都取得了骄人的成绩！

现在这支团队自己创业，创自己的品牌！以更加饱满的工作热情，在原先已成熟机型的基础上，精益求精，从机器的材质、加工工艺、配件选用，以及机器的外形等等，全方位地进行了提升，同时通过抓管理，努力降低生产成本，将品质更优良，性能更可靠，机器更持久耐用，性价比更高的产品提供给海内外广大用户。

当前，阳天品牌的冷镦成型机已经被国内许多著名厂家和对机器质量十分挑剔的海外用户采购，通过实际使用，客户们对“阳天”品牌冷镦成型机的质量都给予了充分的肯定和赞扬！

阳天公司倡导“立信，立德”的企业精神，在公司的经营活动中践行“客户的需求，我们的追求”的市场理念和“诚信为本，互惠互赢”的市场准则！

热烈欢迎广大海内外客户来公司参观，指导和洽谈合作！

COMPANY INTRODUCTION

Anhui Sunsky Machinery Industry Co., Ltd. is located at a beautiful city-Ning guo in the south part of Anhui province. Ning guo is a rising industrial city with deep richness in culture, the city is surrounded by a lot of famous cities and well-known mountains, really scenic spots and historical sites like poem , like picture cluster on here. Furthermore, thanks to the convenient traffic condition, relying on Shanghai , the biggest industrial city, Ning guo has become a modern manufacturing industry base in China!

The whole R&D and production team of Sunsky, insists on the craftman’ s spirit that is “Only strict, but true”, carefully making every Multi-station Cold Upsetting Former. The basic backbone of this team all are the first pioneers for self designing and self manufacturing Multi-station Cold Upsetting Formers at mainland in china. In the past more than ten years, this team successively co-operated with several companies for making formers at home market, and all got remarkable achievements!

Right now this team does its own business by itself, however we start our own business by ourself, creating our own brand ! We plunge into making formers with more enthusiasm on the base of originally matured versions ! Strive to increase perfection ! From choosing material, selecting fittings, technical craftwork, even to the appearance of the machine, etc., we have done a lot of innovations on the formers with Sunsky brand ! that is to greatly raise the machine level ! At the same time, by good basic management,try to reduce production cost, we provide better guality , more reliable performance, more durable,more cost effective formers for the customers both from home & abroad !

At present stage, the Sunsky formers have been purchased by a lot of famous factories from domestic & international markets including some overseas customers who are very critical of quality ! It proves the quality and the practical value of Sunsky formers through their actual applications, the customers have given the full affirmation and praise to the guality and durability of Sunsky formers!

Sunsky company advocates “To stick promise ,to set up virtue” in the spirit of enterprise. We always adhere to the purposes and philosophy that is “Customer demand is our pursuit” during the operation activities of the company, and abide by the market rule that is “Honesty & Mutual Win” !

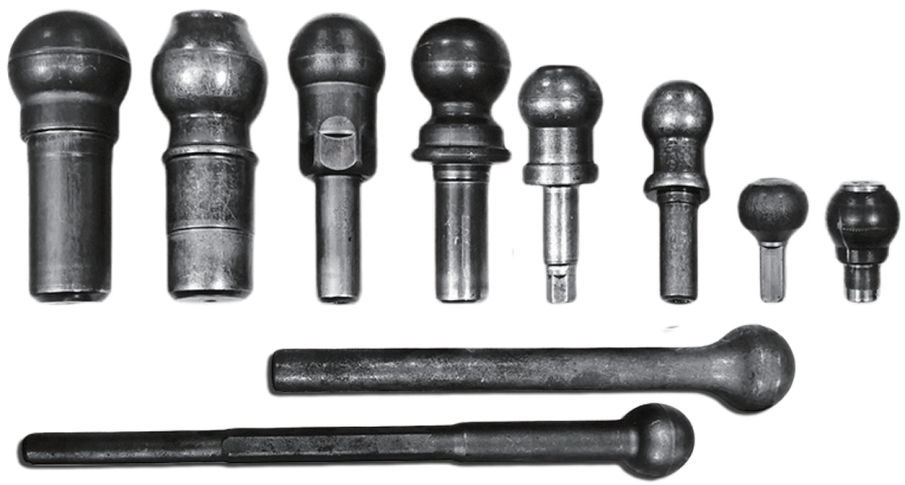
However, we warmly welcome customers from home & abroad to visit our company, do instruction and discuss cooperation with us !

APPLICATION TERRITORY

应用领域

多工位冷镦成型机是金属成型机械中的一种高精度、高产能、自动化程度较高的专业机床。冷镦工艺和冷镦成型机是紧固件行业用来生产各种螺栓、螺母及其它金属零部件的重要手段。由于冷镦设备本身的先进性和冷镦工艺的优越性，也使得它能广泛应用于国民经济各个领域，如：航空、轮船、机械、轨道交通、汽车、摩托车、自行车、建筑、电器、电子及通讯等行业的紧固件及异形非标件的加工生产。

Auto multi-station cold Upsetting Former is a specialized machine tool with high precision,high productivity and more automation among metal forging machinery . Cold upsetting technique and cold upsetting formers are used as an important means for producing different kinds of bolts, nuts and other metal parts in the field of fastener industry.Thanks to the advantage of the cold upsetting equipment itself and the superiority of cold upsetting technique ,the formers also are widely used in different national economic territories for producing fasteners and abnormal non-standard parts such as aviation,steamer,machinery,rail traffic, vehicle, motorcycle,bicycle,architecture,electric appliance ,electronic and communication products,etc.







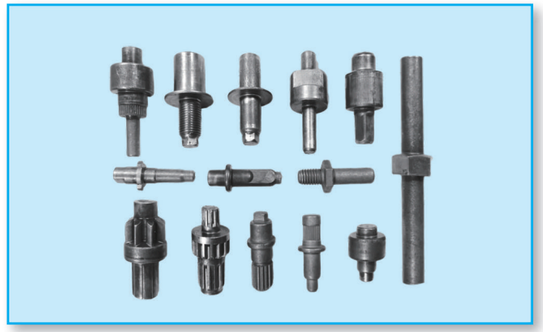


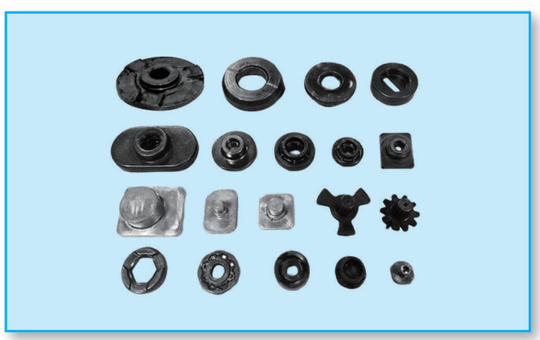
APPLICATION TERRITORY 应用领域





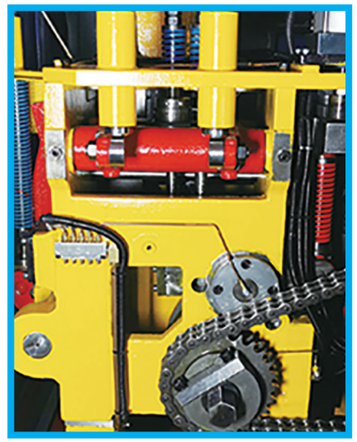




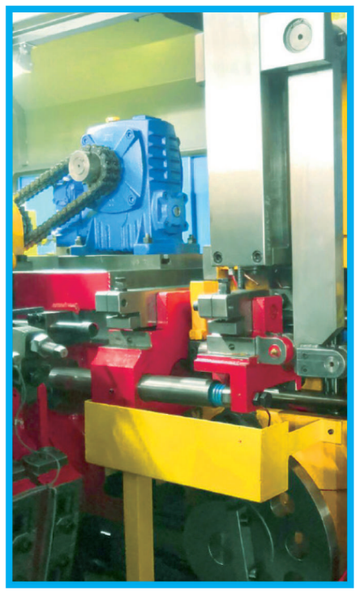




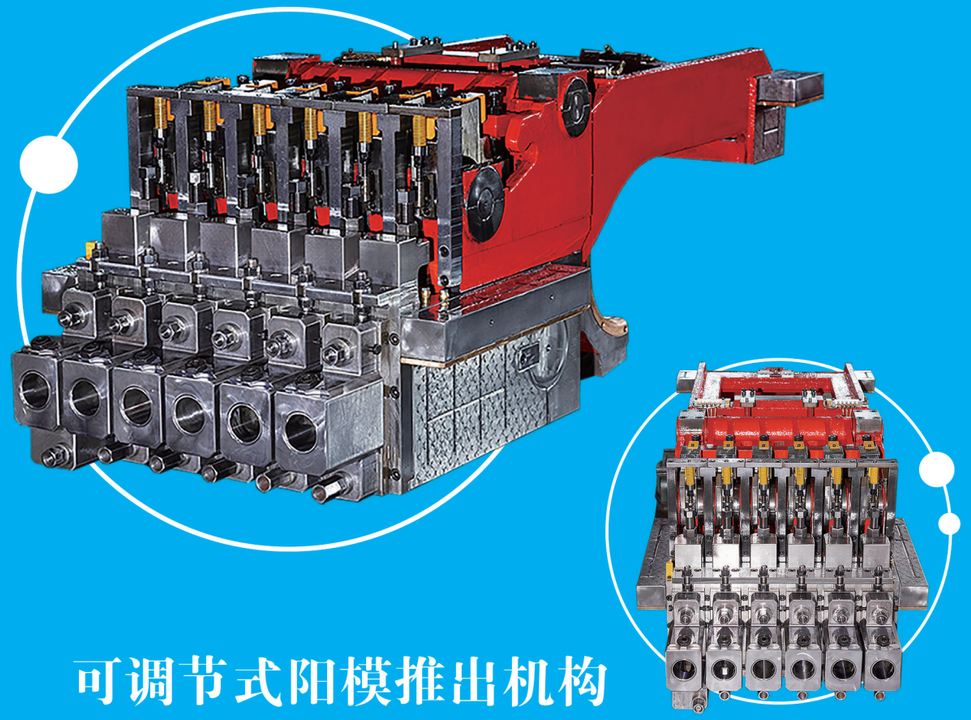
高精度线性夹持送料机构 HIGH PRECISION LINEAR GRIPPING FEED MECHANISM



◎采用夹钳夹住材料，直线水平运动方式送料，既平稳又可靠。
◎夹钳送料到位回程时，配备同步防倒料夹钳，将线材夹住，确保送料绝无退料现象。
◎无需挡料机构，避免线材头部端面损伤，切料端面齐整，有利于提高冷镦产品精度。
◎送料机构两种夹钳的压料力均可调节，保证正常送料的同时，减少对材料表面的损伤。
◎电器可控制夹钳在任意位置张开，方便上料和退料，或空机试车，操作简便快速。
◎配备自动调整送料长度电控系统，实现送料智能化操作。
◎降低使用成本。送料夹钳制作成本远低于送料轮，且其使用磨损小，使用寿命更长。
◎送料精度大幅度提高，不再受老式棘轮送料机构的角度限制，为冷镦高精度产品提供了有效保证



◎ Use gripper to clamp the material, feed the material in horizontal linear moving way, that is stable and reliable.
◎ When the gripper sends the material in place and starts to return, equipped with another synchronous anti-to return gripper for holding the material, it ensures that there is no return for the material.
◎ There is no baffle device required, it can avoid the end surface of the wire head to be damaged, however the cutting end face looks nice. It is helpful to improve the accuracy of cold upsetting products.
◎ The holding force for both 2 grippers in the feeding mechanism can be adjusted, to ensure normal feeding, however the damage of the surface of the material can be reduced also at the same time.
◎ The gripper can open anywhere, that is controlled by electric appliance. It is convenient for feeding and discharging, or test running at idle, the method is simple and quick in operation.
◎ Equipped with electronic control system for automatically adjusting feeding length, it realizes intelligent feeding operation.
◎ Lower the use cost. The production cost of a feeding gripper is much lower than to make a feeding wheel. If adopting feeding gripper, it has the advantage of longer service life with less wear.
◎ The feeding accuracy is greatly improved, it is no longer limited by the angle of the old ratchet feeding mechanism, it provides an effective guarantee for upsetting high precision products.

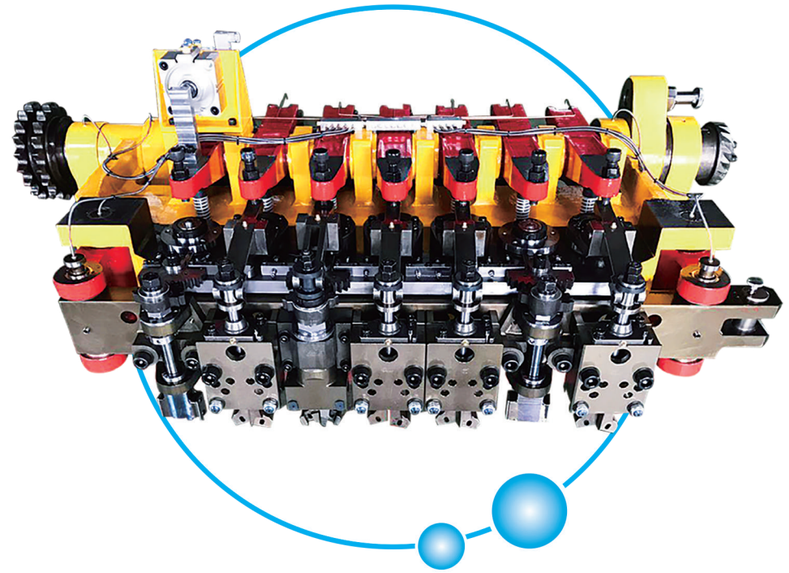


可调节式阳模推出机构

ADJUSTABLE KNOCK OUT MECHANISM FOR MALE DIE

◎ 阳模推出机构的各工位独立安装，可单独调整。
◎ 阳模推出的时间根据冷镦需求可调整快慢。
◎ 阳模推出的行程根据冷镦需求可调整长短。
◎ 阳模推出机构各工位的复位压力可以单独调节，有效降低传动负载。
◎ 每个工位可单独快速更换保险销。
◎ 通出调试简便，无需更换推出顶杆。

◎ Each station of knock-out mechanism for male die is installed separately, it can be adjusted individually.
◎ The speed of knock-out time for male die can be adjusted according to the requirement of cold upsetting.
◎ The length of knock-out travel for male die can be adjusted according to the requirement of cold upsetting.
◎ The reset pressure for each station of knock-out mechanism for male die can be adjusted individually, it effectively reduces the transmission load.
◎ The safety pin can be exchanged individually and quickly for each station.
◎ It is simple and convenient for adjusting knock-out movement, it is no need to replace knock-out rod.

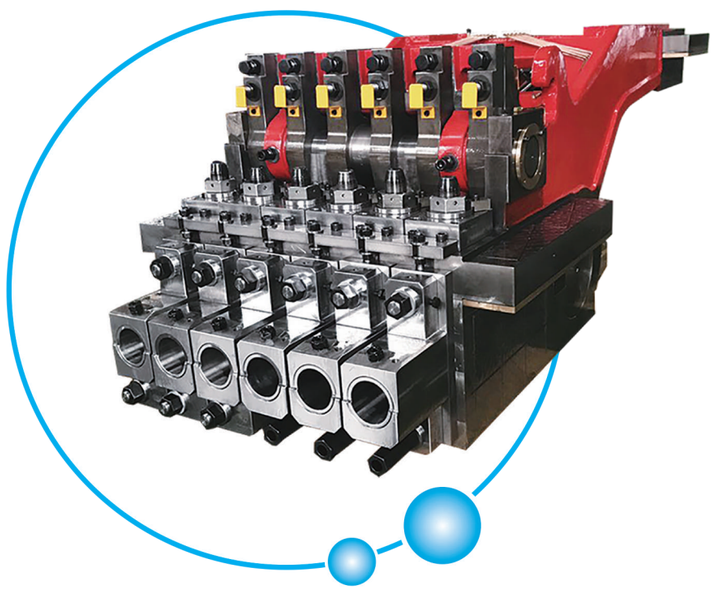


超高质量部件组

高精度多功能复合式夹钳机构，有平移大张开钳，螺母钳和翻转大张开钳，此三种夹钳可任意互换、共享。其关键突破性的设计是翻转大张开钳既能翻转，又可以大张开，拓展了异形件的生产范围，降低了模具制造成本。

Due to the high accurate multi-function compound gripping mechanism, there are translational wide open gripper, nut gripper and turnover wide open gripper, and these 3 grippers can be interchanged and shared at will. However the key breakthrough design is that the turnover wide open gripper can both turn over and widely open, it expands the production range for different kinds of abnormal parts and reduces the manufacturing cost for the dies.

SUPER HIGH QUALITY UNITS



超高质量部件组

高精度主滑块连接后翼设计，使其运行时稳定准确，前后翼底部采用超耐磨镶嵌式自润滑铜板，长期确保精度，增长使用寿命，冲具的后几序均可实现反冲孔功能。

High accuracy main sliding block is designed to be connected with rear wing for letting it run stably and precisely,the bottom of front and back wing is adopted super wearing inserted copper plate with self lubrication,it can ensure accuracy and extend service life. The post stations of punching tool can be fulfilled the function of reverse punching.

SUPER HIGH QUALITY UNITS

THE OPERATING AND DETECTING SYSTEM FOR INTELLIGENT TOUCH SCREEN

智能触摸屏操作检测系统



◎可视化显示设备的负载电流，转速，频率等数据。

◎具备当日和累计双组计数功能，具备无限数量记录保存功能。

◎实时采集设备镦造过程的电流负载数据，监控产品生产状态。

◎记录每组模具成型产品数量，比对模具的工作寿命，并可设置提示。

◎系统自带信号监控功能，方便技术人员维护设备的电气线路。

◎系统故障自动提示，并显示处理方法，方便操作人员排除故障恢复生产。

◎当变频器出现故障时，按出高级显示终端二维码，通过个人智能手机扫描二维码，接入云端数据，立刻了解故障内容和排除方法。

◎设备工作状态用信号灯颜色区分（红黄绿三色灯），方便识别设备工作状态。

◎电动脉冲数字化挡料，触摸屏调整（生产长产品或短产品时，无需更换挡料杆），无需人工调整。

◎电动脉冲式数字化送料长度，触摸屏调整，无需人工调整。

◎电子手轮微动，方便调试设备，校对夹钳。

◎因冷镦机初次成型容易造成不良品，自动排除初次生产的产品待检，初动排出数量可任意调整。（选配）

◎安全防护光栅：保护调试区域人员安全，手伸入机器操作区域时，设备立刻停机，并且无法连动。（选配）

◎设备正常工作时，如果意外开门，设备立即停机，并可指示具体门的位置。（选配）

◎实时检测曲轴和滑块的运行温度，当监测机构部位出现高温异常时，即刻停机报警并显示具体位置 /4 点检测。（选配）

◎电器系统控制箱内恒温装置：温度稳定，延长电器元件和主驱动器的工作寿命。（选配）

◎冷却油管自动升降，方便调试操作，油管抬起时自动关闭油泵，防止油泵堵转和油管内油外溢。（选配）

◎智能电表系统：可以检测设备的实际用电量，电流值，电压值，功率因素等参数。（选配）

◎自动吹气控制：自动吹模具表面的铁屑和异物。（选配）

◎输送带可加装变频器，根据产品生产速度来自由调节其输送速度。（选配）

◎云端设备监控系统：通过物联网终端连接云端平台，实时了解设备运行生产状态，并可通过手机 APP 实时监控。（选配）

◎数据采集开放接口：通过开放此接口，可以顺利接入客户的 ERP 和 MES 系统，来采集设备的实时数据。（选配）

◎超慢速连续生产功能：此功能可以在机台慢速下生产需要慢速生产的产品。（选配）

THE OPERATING AND DETECTING SYSTEM FOR INTELLIGENT TOUCH SCREEN

智能触摸屏操作检测系统

◎ The data of load current， rotational speed and frequency etc.for the equipment can be visually displayed.

◎ Be provided with the dual counting function of on that day and accumulative total， having the record saving function for infinite number.

◎ Real time collection for load current data of upsetting process，monitoring production status of the equipment.

◎ Record the number for moulded products in each group， compare the working life of the die，however the prompt can be setted.

◎ The system is with signal monitoring function，it helps technician to maintain electrical circuit for the equipment.

◎ Have automatic alarm prompt system for abnormal trouble， and show how to fix it，it helps operator to remove the fault and resume production.

◎ If the convertor is in a failure，choose the QR code of advanced terminal diaplay， scan this QR code by personal smartphone，and access the cloud data，however，understand the problem content and shooting trouble immediately.

◎ The working status of the equipment is distinguished by the different colors of the signal lights，（There are Tri-color lights such as Red，Yellow and Green），it is convenient for identifying the working status of the equipment.

◎ Equipped with electro pulse digital baffle device that is adjusted via touch screen， without turning handwheel by manual for adjustment. It is also not necessary to change stop rod， if making long length product or short length product.

◎ The feeding length is digitalized by electro pulse device，that is adjusted via touch screen，it is no necessary to operate by turning handwheel.

◎ There is micro inching device for electronic handwheel， it is convenient for adjusting equipment and checking up grippers.

◎ Since the first forming for the former easily produces waste， automatically exclude “to be inspected” for the first production，however，the excluding number for the first production can be adjusted at will.（Optional）

◎ Safety protective grating：To protect the safety of personnel in the testing area,if the hand reaches into the operating area , the equipment will stop immediately,and no linkage can be done.（Optional）

◎ The equipment works in order. if opening the door accidentally，the equipment will stop immediatelly，and the location of the exact door can be indicated .（Optional）

◎ There is real-time detection for running temperature of crankshaft and slider. If the position of the monitoring mechanism appears abnormal high temperature ，the machine will stop and give an alarm immediately，and the exact location can be indicated. There are 4 detecting points available.（Optional）

◎ Constant-temperature apparatus in the electrical system control box：The temperature is stable and the working life of main driver and electrical components can be prolonged .（Optional）

◎ The cooling oil pipes can be lifted up and down automatically，it is convenient for adjustment and operation. When the oil pipe lifts up， the oil pump will be closed for avoiding to be choked and oil spilling out.（Optional）

◎ Smart electricity meter system：It can detect actual power consumption,current value,voltage value and power factor etc.for the equipment.（Optional）

◎ Automatic air supply controller:Automatically blow away the chip segment and rubbish from the surface of the die.（Optional）

◎ The convertor can be installed for the convey belt，thus the transportation speed can be adjustable freely according to the speed of production.（Optional）

◎ Cloud platform for equipment monitoring system：Connect cloud platform via Internet of Things,understand the production status of the equipment in real time, however，the real time monitoring can be done availably through smartphone APP.（Optional）

◎ Open interface for data collection:By opening this interface，the client ERP and MES system can be smoothly accessed， for collecting real-time data of the equipment.（Optional）

◎ Continuous production function at super slow speed: This function can produce products that require slow production at slow running speed for the machine.（Optional）



空压离合器 AIR CLUTCH

1、空气离合器传动部位，主传动轴与飞轮瞬间结合或分离，使主机在“寸动时”马达不会急停、急启动，以保护马达与变频器。

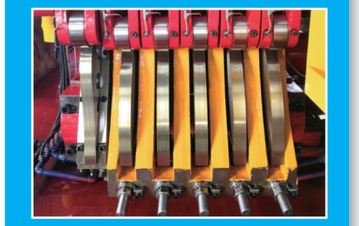
The ON/OFF between main drive shaft and flywheel can be actuated at once, due to air clutch,it is able to let the former run at inching mode,but the motor will not stop instantly or start suddenly for protecting motor and converter.



电动脉冲数字化挡料 ELECTRIC PULSE DIGITAL BAFFLE DEVICE

2、电动脉冲数字化挡料、触摸屏调整（生产长产品或短产品时无需更换挡料杆）无需人工手摇 。

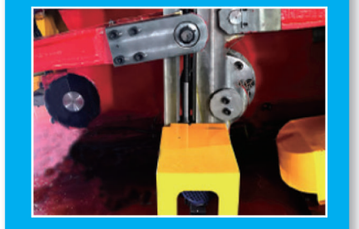
Electric pulse digital baffle device that is adjusted via touch screen,without turning handwheel by manual.It is not necessary to change stop rod,if making long length product or short length product.



后通出机构 REAR KNOCK OUT MECHANISM

3、后通出机构各工位可单独调整，且最后一个工位可以通过调整凸轮位置或更换凸轮实现切边通出动作，并配有压力检测安全销。

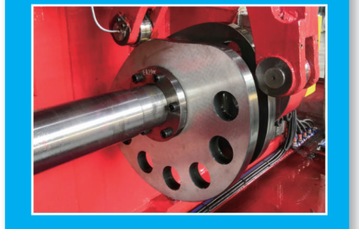
Each station of rear knock out device can be adjusted individually,and the last station can be realized the action of knocking out trimmed product via adjusting the location of cam or changing different cam,however the safety pin with the function of pressure check-up is attached.



电动式数字化送料 ELECTRICAL DIGITAL FEEDING

4、电动脉冲式数字化送料长度、触摸屏调整，无需人工手摇。

The feeding length is digitalized by electric pulse device,that is adjusted via touch screen,it is no necessary to operate by turning handwheel.



共轭凸轮驱动夹钳旋摆 THE SWING OF GRIPPER IS DRIVEN BY CONJUGATE CAM

5、共轭凸轮驱动夹钳旋摆，高速往返运动时，稳定可靠。

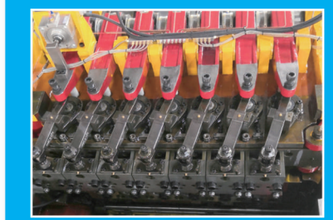
The swing of gripper is driven by conjugate cam,so the movement is reliable even at high speed return.



手摇式数字化挡料 DIGITAL BAFFLING OPERATED BY HAND WHEEL

6、长滑块手摇式数字化挡料调整（生产长产品或短产品时无需更换挡料杆）。

The long sliding block is used for digital baffling adjustment that is done by hand wheel.(It is not necessary to change stop rod,if making long length product or short length product.)



旋摆气动夹钳 SWING PNEUMATIC GRIPPER

7、旋摆气动夹钳，夹料力可调。短寸时，第一组夹钳自动不夹取。

Thanks to swing type pneumatic gripping mechanism,the gripping capacity is adjustable.If the wire is in short size ,the first gripper will automatically free clamping.



滑动式后通牙管 SLIDING SCREWED SLEEVE OF REAR K. O .

8、滑动式手摇后通牙管调整，高效、简洁。

Due to manual adjustment for sliding screwed sleeve of rear k・o, it is simple but with high efficiency.



剪断部位 CUT OFF PART

9、连杆滑板驱动剪料，动作平稳，可靠有力，同时圆周式剪刀可确保剪断面整齐、平整。

Cutting wire is actuated by link block system, the movement is stable and reliable, as well as by using circular shears for assuring the kerf clear and neat.

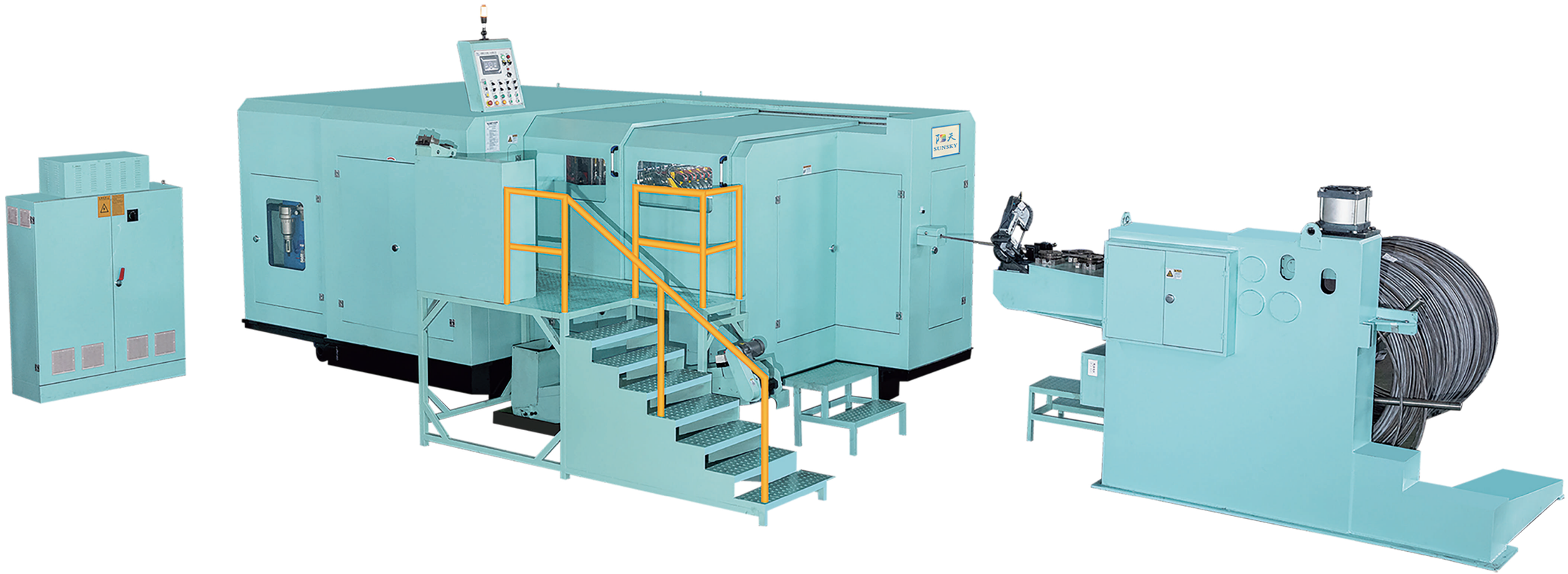
ZBF 系列四工位螺栓冷镦机

ZBF SERIES
4 STATION
BOLT FORMER



ZBP 系列五工位零件成型机

ZBP SERIES
5 STATION
PARTS FORMER



ZBP系列六工位零件成型机

ZBP SERIES
6 STATION PARTS FORMER



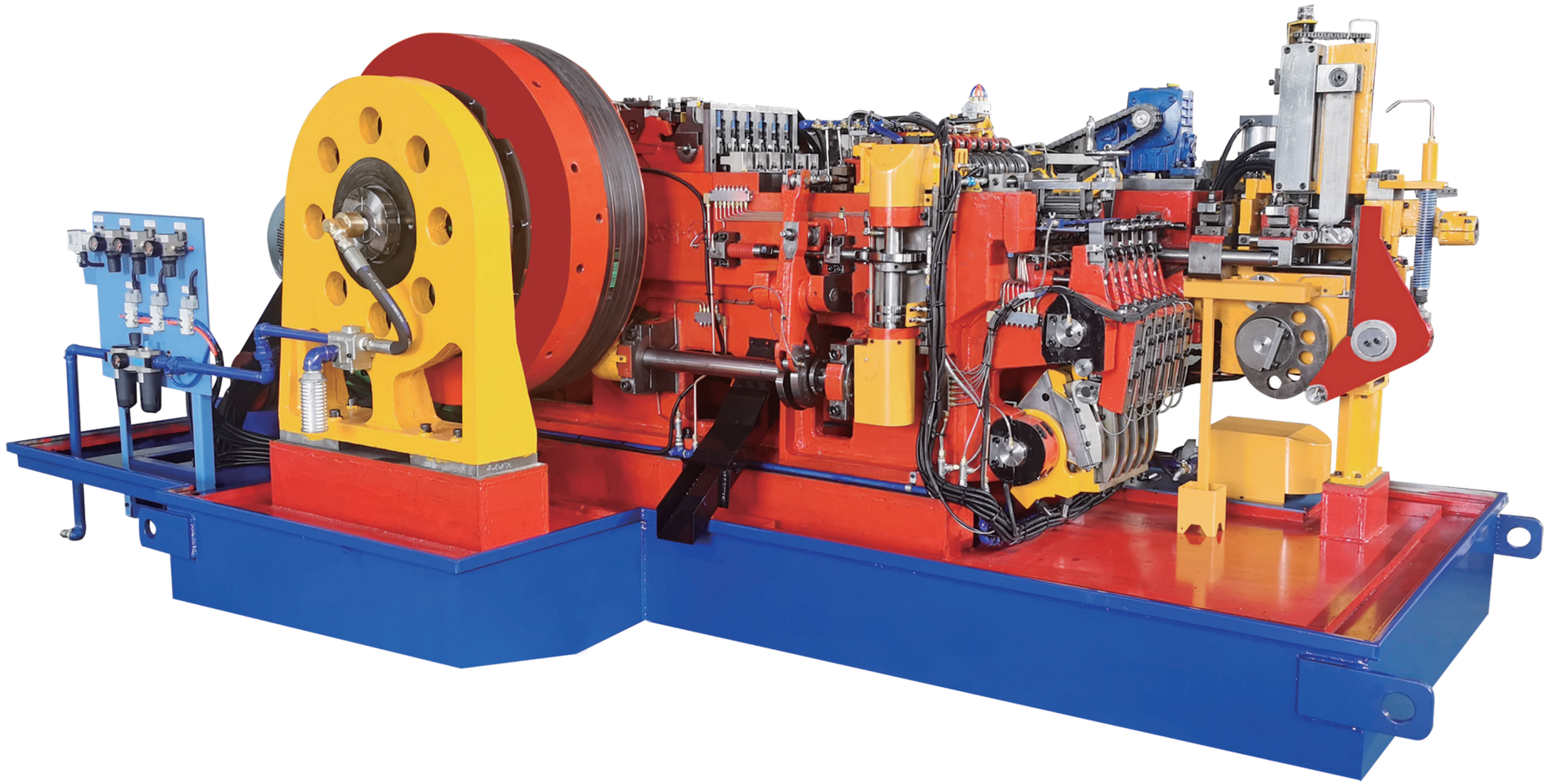
ZBP系列七工位零件成型机

ZBP SERIES
7 STATION
PARTS FORMER



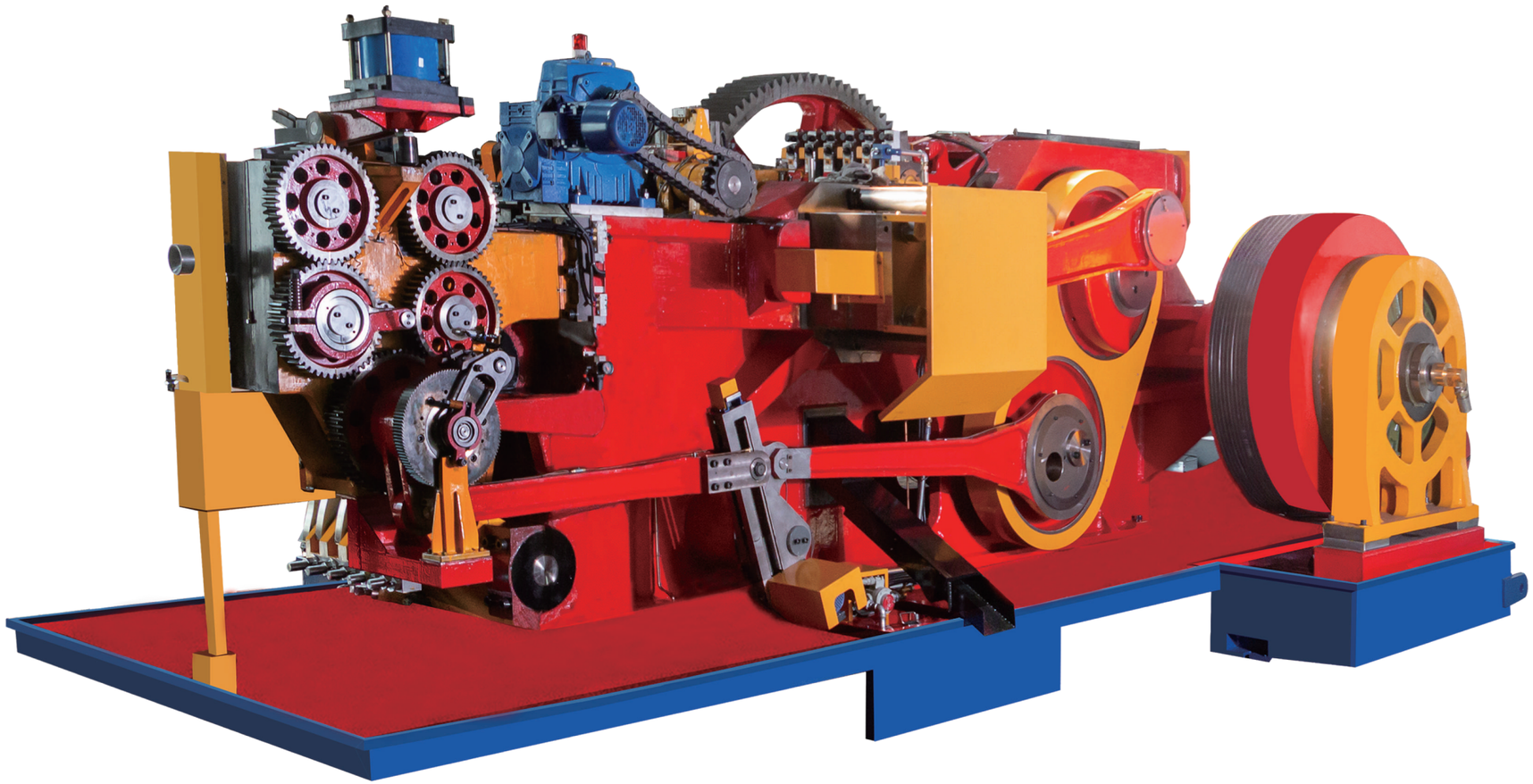
ZBP系列六工位零件成型机

ZBP SERIES
6 STATION PARTS FORMER



ZBP系列六工位零件成型机

ZBP SERIES
6 STATION PARTS FORMER



ZBF 系列四工位螺栓冷镦机

ZBF Series 4 Station Bolt Former

主要技术参数

MAIN TECHNICAL PARAMETERS

型号 Model	工位数 Forging station	压造力 Forging force	最大剪断直径 Max.cut-off dia	最大剪断长度 Max.cut-off length	生产速度 Output rate	冲具通出行程 P.K.O. Stroke	打模通出行程 K.O. Stroke	主滑台行程 Main ram stroke	主电机功率 Main motor power	剪模外形尺寸 Overall dims.of cut off die	冲具外形尺寸 Overall dims.of punch die	打模外形尺寸 Overall dims.of main die	模具间距 Die pitch	机器大约重量 Approx. weight	可制螺丝直径 Applicable bolt dia	可制丝头下长度 Shank length of blank
单位Unit	NO.	kgf	mm	mm	pcs/min	mm	mm	mm	kw	mm	mm	mm	mm	T	mm	mm
ZBF-64S	4	35.000	¢8	80	140-210	12	70	110	15	¢30×45L	¢40×90L	¢50×85L	60	8	3-6	10-65
ZBF-84S	4	60.000	¢10	115	120-180	25	92	160	22	¢35×50L	¢45×125L	¢60×130L	80	14	5-8	15-90
ZBF-84L	4	70.000	¢10	185	100-140	30	160	262	22	¢35×59L	¢45×125L	¢60×185L	80	18	6-10	20-150
ZBF-104S	4	80.000	¢12	135	90-140	30	118	190	30	¢45×59L	¢53×115L	¢75×135L	90	18	6-10	15-110
ZBF-104L	4	80.000	¢12	185	80-130	30	160	262	30	¢45×59L	¢53×115L	¢75×185L	94	21	6-10	20-152
ZBF-134L	4	120.000	¢15	190	75-110	45	170	270	37	¢67×69L	¢60×130L	¢86×190L	110	28	8-12.7	20-160
ZBF-134LL	4	130.000	¢15	285	50-80	40	280	380	37	¢63×69L	¢60×229L	¢86×305L	110	38	8-12.7	75-262
ZBF-164S	4	210.000	¢20	195	70-100	40	178	260	55	¢60×90L	¢75×185L	¢100×190L	120	45	10-16	20-160
ZBF-164LL	4	210.000	¢20	350	40-70	46	320	490	55	¢64×100L	¢75×185L	¢100×345L	120	60	10-16	100-305
ZBF-204L	4	350.000	¢23	240	55-80	46	220	346	75	¢75×120L	¢90×215L	¢125×240L	140	62	12-20	25-200
ZBF-204LL	4	350.000	¢23	380	40-65	50	360	496	75	¢75×120L	¢90×215L	¢125×345L	140	75	12-20	100-310
ZBF-254S	4	430.000	¢28	253	40-70	40	230	330	90	¢80×130L	¢120×270L	¢140×250L	160	105	14-25.4	35-200
ZBF-254L	4	450.000	¢32	320	35-65	50	290	446	90	¢80×130L	¢120×270L	¢140×300L	160	135	16-25.4	50-260
ZBF-304L	4	500.000	¢35	420	30-50	60	380	580	132	¢118×150L	¢140×300L	¢168*420L	180	180	24-30	100-350

备注：

1. 产品的生产速度取决于产品的形状、尺寸和材料。
2. 表中所列最大材料切断直径和可制产品尺寸按中碳合金钢计算。
3. 本公司保留修改以上参数的权利 . 如有更改恕不另行通知。

REMARKS:

1.Output rate is subject to the shape,size and material of the product.
2.The Max.cut-off dia.and the product size shown above are calculated on the base of medium carbon alloy steel.
3.SUNSKY reserves the right to change above mentioned technical specifications without prior notice.

ZBP 系列五工位零件成型机

ZBP Series 5 Station Parts Former

主要技术参数

MAIN TECHNICAL PARAMETERS

型号 Model	工位数 Forging station	压造力 Forging force	最大剪断直径 Max.cut-off dia	最大剪断长度 Max.cut-off length	生产速度 Output rate	冲具通出行程 P.K.O. Stroke	打模通出行程 K.O. Stroke	主滑台行程 Main ram stroke	主电机功率 Main motor power	剪模外形尺寸 Overall dims.of cut off die	冲具外形尺寸 Overall dims.of punch die	打模外形尺寸 Overall dims.of main die	模具间距 Die pitch	机器大约重量 Approx. weight	可制螺丝直径 Applicable bolt dia	可制丝头下长度 Shank length of blank
单位Unit	NO.	kgf	mm	mm	pcs/min	mm	mm	mm	kw	mm	mm	mm	mm	T	mm	mm
ZBP-65S	5	40.000	¢8	80	120-200	15	70	110	15	¢30×45L	¢40×90L	¢50×85L	60	10	3-6	10-65
ZBP-85S	5	80.000	¢10	115	90-150	25	92	160	22	¢35×50L	¢45×125L	¢60×130L	80	17	5-8	15-90
ZBP-105S	5	100.000	¢14	135	85-130	35	118	190	30	¢45×59L	¢53×115L	¢75×135L	90	20	6-10	15-110
ZBP-135L	5	130.000	¢16	190	60-100	45	170	270	37	¢67×69L	¢60×130L	¢86×190L	110	31	8-12.7	20-160
ZBP-165S	5	220.000	¢23	195	55-95	45	178	274	55	¢75×100L	¢75×185L	¢108×200L	129	52	10-16	20-160
ZBP-205L	5	360.000	¢26	240	45-75	55	220	346	75	¢75×120L	¢90×215L	¢125×240L	140	75	12-20	25-200
ZBP-255SL	5	440.000	¢30	253	35-55	40	230	330	90	¢80×130L	¢120×270L	¢140×250(450)L	160	115	14-27	35-220
ZBP-305L	5	550.000	¢36	420	25-45	60	380	580	132	¢118×150L	¢140×300L	¢168×420L	180	200	24-30	100-350

备注：

1. 产品的生产速度取决于产品的形状、尺寸和材料。
2. 表中所列最大材料切断直径和可制产品尺寸按中碳合金钢计算。
3. 本公司保留修改以上参数的权利 . 如有更改恕不另行通知。

REMARKS:

1.Output rate is subject to the shape,size and material of the product.
2.The Max.cut-off dia.and the product size shown above are calculated on the base of medium carbon alloy steel.
3.SUNSKY reserves the right to change above mentioned technical specifications without prior notice.

ZBP 系列六工位零件成型机 ZBP Series 6 Station Parts Former

主要技术参数 MAIN TECHNICAL PARAMETERS

型号 Model	工位数 Forging station	压造力 Forging force	最大剪断直径 Max.cut-off dia	最大剪断长度 Max.cut-off length	生产速度 Output rate	冲具通出行程 P.K.O. Stroke	打模通出行程 K.O. Stroke	主滑台行程 Main ram stroke	主电机功率 Main motor power	剪模外形尺寸 Overall dims.of cut off die	冲具外形尺寸 Overall dims.of punch die	打模外形尺寸 Overall dims.of main die	模型间距 Die pitch	机器大约重量 Approx. weight	可制螺丝直径 Applicable bolt dia	可制丝头下长度 Shank length of blank
单位Unit	NO.	kgf	mm	mm	pcs/min	mm	mm	mm	kw	mm	mm	mm	mm	T	mm	mm
ZBP-66S	6	40.000	¢8	80	110-190	20	70	110	18.5	¢30×45L	¢40×90L	¢50×85L	60	13	3-6	10-65
ZBP-66S(H)	6	70.000	¢10	115	90-150	25	92	160	22	¢35×45L	¢45×125L	¢60×130L	70	16	3-8	15-90
ZBP-86S	6	90.000	¢12	115	90-150	25	92	160	22	¢35×50L	¢45×125L	¢60×130L	80	18	3-8	15-90
ZBP-106S	6	110.000	¢15	135	80-120	35	118	190	37	¢52×75L	¢53×115L	¢75×135L	94	24	6-10	15-110
ZBP-136L	6	140.000	¢18	190	60-90	50	170	270	45	¢67×69L	¢60×130(160)L	¢94×190L	110	35	8-14	20-160
ZBP-136L(H)	6	160.000	¢20	190	60-90	50	170	270	37	¢60×69L	¢60×130(160)L	¢94×190L	110	35	8-14	20-160
ZBP-136LL(H)	6	160.000	¢18	320	45-70	60	300	380	55	¢60×100L	¢60×232L	¢94×294L	110	48	8-14	75-280
ZBP-166S	6	250.000	¢25	195	55-90	55	178	274	75	¢84×120L	¢75×185L	¢108×220(300)L	129	56	10-16	20-160
ZBP-206L(H)	6	430.000	¢32	240	40-70	55	240	346	110	¢85×120L	¢90×215L	¢125×240(450)L	140	92	16-24	25-220
ZBP-256S(H)	6	600.000	¢38	320	40-60	65	300	446	132	¢109×150L	¢120×270L	¢160×300(450)L	172	150	20-30	50-280
ZBP-256L	6	600.000	¢38	370	30-50	65	370	510	160	¢109×150L	¢120×270L	¢160×300(550)L	172	185	20-30	50-350
ZBP-276S(H)	6	800.000	¢42	320	30-50	65	300	450	185	¢129×180L	¢138×270L	¢178×300(450)L	194	185	20-33	30-280
ZBP-306S(H)	6	1000.000	¢46	320	35-55	55	300	500	220	¢139×195L	¢158×220L	¢195×300(450)L	215	250	20-33	50-280

备注：

1. 产品的生产速度取决于产品的形状、尺寸和材料。
2. 表中所列最大材料切断直径和可制产品尺寸按中碳合金钢计算。
3. 本公司保留修改以上参数的权利 . 如有更改恕不另行通知。

REMARKS:

1.Output rate is subject to the shape,size and material of the product.
2.The Max.cut-off dia.and the product size shown above are calculated on the base of medium carbon alloy steel.
3.SUNSKY reserves the right to change above mentioned technical specifications without prior notice.

ZBP 系列七工位零件成型机 ZBP Series 7 Station Parts Former

主要技术参数 MAIN TECHNICAL PARAMETERS

型号 Model	工位数 Forging station	压造力 Forging force	最大剪断直径 Max.cut-off dia	最大剪断长度 Max.cut-off length	生产速度 Output rate	冲具通出行程 P.K.O. Stroke	打模通出行程 K.O. Stroke	主滑台行程 Main ram stroke	主电机功率 Main motor power	剪模外形尺寸 Overall dims.of cut off die	冲具外形尺寸 Overall dims.of punch die	打模外形尺寸 Overall dims.of main die	模具间距 Die pitch	机器大约重量 Approx. weight	可制螺丝直径 Applicable bolt dia	可制丝头下长度 Shank length of blank
单位Unit	NO.	kgf	mm	mm	pcs/min	mm	mm	mm	kw	mm	mm	mm	mm	T	mm	mm
ZBP-87S	7	80.000	¢11	115	90-150	25	92	160	22	¢35×50L	¢45×125L	¢60×130L	70	16	3-8	15-90
ZBP-107S	7	120.000	¢15	135	65-100	35	118	190	37	¢52×75L	¢53×115L	¢75×135L	94	28	6-10	15-110
ZBP-137L(H)	7	160.000	¢20	190	60-90	55	175	270	45	¢60×69L	¢60×130L	¢94×190L	110	40	8-14	20-160
ZBP-167S	7	285.000	¢26	190	45-80	55	178	274	90	¢84×120L	¢85×185L	¢108×220(300)L	129	65	10-18	20-160
ZBP-227L	7	450.000	¢35	260	40-60	60	240	346	110	¢98×120L	¢120×215L	¢148×240(450)L	160	110	16-27	25-220
ZBP-337S	7	1200.000	¢48	320	35-50	65	300	500	220	¢139×195L	¢168×270L	¢215×300(450)L	235	280	24-36	50-280

ZBP 系列八工位零件成型机 ZBP Series 8 Station Parts Former

主要技术参数 MAIN TECHNICAL PARAMETERS

ZBP-168S	8	320.000	¢28	195	50-80	55	178	274	90	¢84×120L	¢75×185L	¢108×220(300)L	129	70	10-18	20-160

备注：
1. 产品的生产速度取决于产品的形状、尺寸和材料。
2. 表中所列最大材料切断直径和可制产品尺寸按中碳合金钢计算。
3. 本公司保留修改以上参数的权利 . 如有更改恕不另行通知。

REMARKS:
1.Output rate is subject to the shape,size and material of the product.
2.The Max.cut-off dia.and the product size shown above are calculated on the base of medium carbon alloy steel.
3.SUNSKY reserves the right to change above mentioned technical specifications without prior notice.

多工位零件成型机

MULTI STATION PARTS FORMER



多工位螺栓冷镦机
Multi-station Bolt Former

型号 Model	用油量 Oil capacity	主气源压力 Main air source pressure	主气管直径 Main air pipe diameter	主电源线径 Main power cord diameter
单位 Unit	kg or L	kg	Inch	mm^2
ZBF-64S	425\500	5～7	1″	10
ZBF-84S	610\720	5～7	1″	10
ZBF-84L	638\750	5～7	1½″	10
ZBF-104S	638\750	5～7	1½″	16
ZBF-104L	780\918	5～7	1½″	16
ZBF-134L	686\807	6～8	1½″	16
ZBF-134LL	1088\1280	6～8	1½″	16
ZBF-164S	850\1000	6～8	1½″	25
ZBF-164LL	1450\1700	6～8	2″	25
ZBF-204L	1162\1367	6～8	2″	35
ZBF-204LL	1880\2200	6～8	2″	35
ZBF-254S	1802\2120	6～8	2″	50
ZBF-254L	2017\2350	6～8	2″	70
ZBF-304L	2126\2500	6～8	2″	95

备注：
1. 主电源线径和空气开关型号是根据电压在 380 V时设定的。
2. 表中主机外形不包含踩踏架，校直机构，操控箱等设备附件。
3. 本公司保留修改以上参数的权利 . 如有更改恕不另行通知。

设备使用辅助参数
Auxiliary parameters for using equipment

主电源空气开关 Air switch of main power	地基承载力 Bearing capacity of ground	主机外形尺寸 Overall dimensions of main machine	设备占地空间 Equipment occupying area
A	T/m^2	m	m
60	4	3.3×2.1×1.6	5.3×3.0×2.3
80	4.5	4.3×2.2×1.8	6.5×3.2×2.5
80	4.5	5.0×2.4×2.1	7.0×3.4×2.8
100	5.5	4.4×2.6×2.1	7.4×3.5×2.8
100	5.5	5.0×2.7×2.2	9.0×3.5×2.9
125	6	5.2×2.8×2.3	10×3.8×2.9
125	6	7.5×2.8×2.6	12.3×3.8×3.2
160	8	5.7×3.2×2.6	12×5.0×2.6
160	8	8.5×3.1×3.2	15.5×5.5×3.2
225	8.5	6.3×3.0×3.0	13×5.2×3.0
225	9.5	9.0×3.1×3.2	16×5.5×3.2
250	9	7.1×4.1×3.2	14×5.7×3.2
300	10	9.5×4.3×3.5	17×7.0×3.5
400	14	9.1×4.35×3.6	18×7.0×3.6

REMARKS:
1. The diameter of main power cord and the model of airbreak switch are set as per the voltage being 380V.
2. The overall dimensions of the main machine on the list do not cover some accessories such as foot rest , straightening device and control box etc.
3. The company reserves the right to change above mentioned technical specifications without prior notice.

多工位零件成型机
Multi-station Parts Former

型号 Model	用油量 Oil capacity	主气源压力 Main air source pressure	主气管直径 Main air pipe diameter	主电源线径 Main power cord diameter
单位 Unit	kg or L	kg	Inch	mm^2
ZBP-65S	425\500	5～7	1″	10
ZBP-85S	625\735	5～7	1″	10
ZBP-105S	664\780	5～7	1½″	16
ZBP-135L	738\868	6～8	1½″	16
ZBP-165S	995\1170	6～8	1½″	25
ZBP-205L	1360\1600	6～8	2″	35
ZBP-255SL	1995\2347	6～8	2″	50
ZBP-305L	2295\2700	6～8	2″	95

备注：
1. 主电源线径和空气开关型号是根据电压在 380 V 时设定的。
2. 表中主机外形不包含踩踏架，校直机构，操控箱等设备附件。
3. 本公司保留修改以上参数的权利 . 如有更改恕不另行通知。

设备使用辅助参数
Auxiliary parameters for using equipment

主电源空气开关 Air switch of main power	地基承载力 Bearing capacity of ground	主机外形尺寸 Overall dimensions of main machine	设备占地空间 Equipment occupying area
A	T/m^2	m	m
60	4.2	3.3×2.2×1.6	5.3×3.2×2.3
80	4.5	4.3×2.3×1.8	6.5×3.5×2.5
100	5.6	4.4×2.8×2.1	7.4×3.7×2.8
125	6.2	5.3×2.9×2.3	10×4.0×2.9
160	8	5.9×3.2×2.8	12.6×5.1×2.8
225	9	6.5×3.1×3.0	13.5×5.3×3.0
250	12	7.1×4.3×3.2	14.5×6.0×3.2
400	15	9.1×4.5×3.6	18×7.0×3.6

REMARKS:
1. The diameter of main power cord and the model of airbreak switch are set as per the voltage being 380V.
2. The overall dimensions of the main machine on the list do not cover some accessories such as foot rest , straightening device and control box etc.
3. The company reserves the right to change above mentioned technical specifications without prior notice.

多工位零件成型机
Multi-station Parts Formers

型号 Model	用油量 Oil capacity	主气源压力 Main air source pressure	主气管直径 Main air pipe diameter	主电源线径 Main power cord diameter
单位Unit	kg or L	kg	Inch	mm^2
ZBP-66S	425\500	5~7	3/4"	10
ZBP-66S(H)	620\730	5~7	1"	10
ZBP-86S	650\765	5~7	1"	10
ZBP-106S	712\837	5~7	1½"	16
ZBP-136L	786\925	6~8	1½"	25
ZBP-136L(H)	816\960	6~8	1½"	16
ZBP-136LL(H)	1165\1370	6~8	1½"	25
ZBP-166S	1162\1367	6~8	2"	35
ZBP-206L(H)	1609\1893	6~8	2"	70
ZBP-256S(H)	2210\2600	6~8	2"	95
ZBP-256L	2652\3120	6~8	2"	120
ZBP-276S(H)	3182\3743	6~8	2"	185
ZBP-306S(H)	2636\3100	6~8	2"	240

备注：
1. 主电源线径和空气开关型号是根据电压在 380 V时设定的。
2. 表中主机外形不包含踩踏架，校直机构，操控箱等设备附件。
3. 本公司保留修改以上参数的权利 . 如有更改恕不另行通知。

设备使用辅助参数
Auxiliary parameters for using equipment

主气源空气开关 Air switch of main power	地基承载力 Bearing capacity of ground	主机外形尺寸 Overall dimensions of main machine	设备占地空间 Equipment occupyingarea
A	T/m^2	m	m
60	4.2	3.3×2.3×1.6	5.3×3.3×2.3
80	4.3	4.5×2.2×1.8	6.5×3.2×2.5
80	4.6	4.6×2.3×1.8	6.7×3.3×2.5
125	6	4.7×2.9×2.1	9.5×3.8×2.8
160	6.5	5.7×3.1×2.3	10.5×4.5×3.0
125	6.7	6.1×3.1×2.3	10.5×4.5×3.0
160	7	8.2×3.2×2.9	13×4.2×3.7
225	9	6.0×3.5×2.8	13×5.5×2.8
300	10	7.0×4.1×3.1	14.5×5.7×3.1
400	13	9.6×4.6×3.6	17×7.0×3.6
500	14	9.9×4.7×3.8	17.3×7.2×4.2
500	15	11.5×5.5×4.2	19.5×8.6×4.5
630	16	11.5×5.85×4.5	16.5×8.2×6.0

REMARKS:
1. The diameter of main power cord and the model of airbreak switch are set as per the voltage being 380V.
2. The overall dimensions of the main machine on the list do not cover some accessories such as foot rest , straightening device and control box etc.
3. The company reserves the right to change above mentioned technical specifications without prior notice.

多工位零件成型机
Multi-station Parts Formers

型号 Model	用油量 Oil capacity	主气源压力 Main air source pressure	主气管直径 Main air pipe diameter	主电源线径 Main power cord diameter
单位 Unit	kg or L	kg	Inch	mm^2
ZBP-87S	620\730	5～7	1″	10
ZBP-107S	773\910	6～8	1½″	16
ZBP-137L(H)	900\1060	6～8	1½″	25
ZBP-167S	1275\1500	6～8	2″	35
ZBP-227L	1870\2200	6～8	2″	70
ZBP-337S	3232\3800	6～8	2″	240
ZBP-168S	1362\1567	6～8	2″	70

设备使用辅助参数
Auxiliary parameters for using equipment

主电源空气开关 Air switch of main power	地基承载力 Bearing capacity of ground	主机外形尺寸 Overall dimensions of main machine	设备占地空间 Equipment occupying area
A	T/m^2	m	m
80	5	4.5×2.3×1.8	6.5×3.3×2.5
125	6.5	4.8×3.0×2.2	10×4.0×3.0
160	7	6.3×3.5×2.5	11×5.0×2.9
225	8	6.0×3.8×3.0	13.5×6.5×3.0
300	11	7.0×4.2×3.3	15×5.9×3.3
630	18	12.5×6.5×5.5	18×9.0×6.5
300	10	6.5×3.8×2.9	13.6×5.8×2.9

备注：
1. 主电源线径和空气开关型号是根据电压在 380 V时设定的。
2. 表中主机外形不包含踩踏架，校直机构，操控箱等设备附件。
3. 本公司保留修改以上参数的权利 . 如有更改恕不另行通知。

REMARKS:
1. The diameter of main power cord and the model of airbreak switch are set as per the voltage being 380V.
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3. The company reserves the right to change above mentioned technical specifications without prior notice.

SALIANT FEATURES

主要特点

空压离合器 AIR CLUTCH

1、采用空压离合器 - 机器启动时电流小，能实现“寸动”、“单次运行”及“连续运行”。后两种运行停机时，主滑块能自动停留在最后位置，确保模具安全，提供最大的操作调试空间。

Being equipped with air clutch with the advantage of low actuating current for operating the former in 3 modes such as Inching, Single Stroke and Continuous Running. The main ram can stop at its rear position automatically, when the former is operated under Single Stroke and Continuous Running modes for guaranteeing the safety of die and leaving the biggest space for operation and adjustment.

旋摆气动式夹钳 SWING PNEUMATIC GRIPPER

2、旋摆气动式夹钳机构夹料力可调，高速运行时夹料稳定。第一组夹钳遇到送料短寸时可自动张开松料，并停机报警。

Thanks to swing type pneumatic gripping mechanism.the gripping capacity is adjustable and clamping power is stable even at high working speed. if the first gripper meets the wire in short size, it can open the jaw for release automatically, however the machine will stop and give the alarm simultaneously.

汽缸控制棘爪驱动 RATCHET DRIVED BY CYLINDER CONTROL

3、压料、送料均采用汽缸控制，棘爪驱动。棘爪在回程时配有自动抬起装置，既可消除摩擦和噪音又可防止带动棘轮反转，送料过程安装有双道超越离合器，确保送料无后退现象。

Pressing and feeding wire is actuated by pawl via the control of air cylinder,the pawl is fixed an auto-raise device , when the pawl goes back ,it can raise, so the friction and noise can be eliminated, further more this device can prevent the ratchet running in reverse direction. however,there are two overdrive clutches fixed in the feeding course, it can guarantee the feed being beyong retreat.

连杆滑板驱动 LINK BLOCK SYSTEM

4、剪料部位为连杆滑板驱动，动作平稳，可靠有力，同时圆周式剪刀可确保剪断面整齐平整。

Wire cutting part is actuated by strong link-block system, the movement is stable and reliable, as well as by using circular shears for assuring the kerf clear and neat.

后通出机构 REAR KNOCK OUT DEVICE

5、后通出机构各工位可单独调整，且最后一个工位可以通过调整凸轮位置或更换凸轮实现切边通出动作。

Each station of rear knock out device can be adjusted individually, and the last station can realize the action of knocking out trimmed product via adjusting the location of cam or changing different cam.

同步运行 SYNCHRONOUS OPERATION

6. 前通出部位与主滑块退回动作同步运行，使工件在成型后暂时停留在阳模内，以避免冲具带出造成变形。

Front knock out part moves simultaneously with the retreat movement of the main ram, for letting the product temporarily stay at mould plunger, in order to prevent the plunger to be dragged away, then damage the product.

检测安全销 TESTING SAFETY PIN

7、后通出与前通出机构均安装有压力检测安全销，在发生异常时会自动断裂并停机报警，确保其它部件完好无损。

Either front knock out device or rear knock out device is fixed a safety pin with the function of pressure check-up, if the abnormal situation happens, the pin will be broken for stopping the former, however send out alert signal as well, for guaranteeing the other parts in good condition.

进口变频器 IMPORTED CONVERTER

8．电器系统配有进口变频器，可方便实现机器生产速度无级调速。PLC 数控检测装置可自动检测机器工作状态及故障报警显示。

There is imported converter available in electrical system, so it is easy to run the former with stepless variable drive, PLC also is used for automatically inspecting the working mode of the former with the functions of fault alarm and fault display.

耐磨材料 WEAR RESISTANT MATERIAL

9．主副滑块均采用耐磨材料，机体内侧采用经淬火处理的进口合金钢，使其保持长期精度稳定性，延长设备和模具使用寿命。

Both main and auxiliary rams, all are made of abrasion resistant material, and the inside plates of the formers are made of imported quench alloy steel for letting the former keep on long term' s precision and stability, the service life of the equipment and the die can be prolonged.

高强度材料 HIGH STRENGTH MATERIAL

10．机身、主滑块、主连杆等主要部件都选用高强度材料，经严格的铸造工艺，消除残余应力处理，防止变形，确保机器钢性，精度长期稳定。

The principal parts such as body frame, main ram, main link lever etc. all are made of high-strength material, however they are treated under strict casting technique, for instance, as stress relieving, in order to prevent deformation and machine rigidity can be promised as well as machine precision can be retained for long term.

数控机床制造 MADE BY NC MACHINE TOOL

11．各部位主要零件及所有凸轮均为数控机床制造，确保了精度和曲线圆滑。

Main components for each part and all cams all are machined by numerically-controlled machine tools, for guaranteeing precision and the curve smooth and sliding.

定制数控系统 OPTIONAL FOR NC SYSTEM

12、可按照用户要求选配触摸屏式人机界面数控系统，用于后通牙管定寸、挡料位置、送料长度设定的自动调整设置，可大大减少模具更换和调整时间．该系统可储存 99 组调整参数，适用于快速换模要求。

Touch screen and man-machine dialogue numerical control system are optional for meeting customer' s requirement,they are used for setting the length of screwed sleeve of rear knock out, the length of barrier and the feeding length, it is convenient for quick die change. This system has a memory capacity of 99 groups of adjustment paranieters for meeting the requirement of quick die change.