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专业制造数控液压冲、折、剪、刨槽、激光切割等全线钣金机械 Professional design and manufacture of Turret Punch Press, PressBrake, Shear....



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香港总部 Head Quarter

梁发记机械有限公司 LFK Machinery Co., Ltd. 香港新界屯门震寰路9号好收成工业大厦9楼9室 Rm.9.9/F., Good Harvest Industrial Building

HongKong Tel:852-24481686 Fax:852-24453999 E-mail:lfk\_net@163.com

上海 上海市嘉定区安亭新镇安智路81号 Tel:021-69511062 86-13818204801 Fax:021-69511062

东莞华辉数控机床有限公司

广东省东莞市清溪镇九乡工业区 邮编:523646 电话:86-769-87737478 传真:86-769-89026169

销售热线: 86-769-87332202 服务热线: 400-830-6398

湖北省襄阳市襄州区云青路光彩公 交枢纽站A7-2厂房 Tel:86-13910047981

#### 信宜华辉数控机床有限公司

广东省信宜市东莞大朗{信宜}产业园 邮编: 525300

华辉数控机床有限公司 LFK MACHINERY GROUP 聚发记机械集团成员

电话: 86-668-8857999 8857618 传真: 86-668-8876682

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梁发记机械集团成员: LFK MACHINERY GROUP

- ■东莞华辉数控机床有限公司 Dongguan Huahui CNC Machinery Co., Ltd.
- ■信宜华辉数控机床有限公司 Xinyi Huahui CNC Machinery Co., Ltd.
- ■信宜协华精密钣金制品有限公司 HIP WAH Precision Sheet Metal Factory Co., Ltd.





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### 公司简介

**Company Introduction** 





东莞华辉数控机床有限公司 Dongguan Huahui CNC Machinery Co., Ltd.

LFK香港梁发记机械有限公司成立于六十年代初,是一家专业生产钣金机械的厂家。公司生产"LFK"品牌系列的: 激光机、数控转塔冲床、数控折弯机、数控剪板机、数控刨槽机等数控钣金设备。产品采用国际标准的机械和液压组件,优先选用先进的CAD/CAM计算机辅助设计钣金管理软件解决方案等,确立了市场的领导地位。配件采用: 欧洲专用数控系统,欧洲光学尺和日本伺服电机,进口的专业刀具和模具等。主要用于电气通讯、五金制造、建筑装饰、电器制造、电梯客车等行业,与欧美先进的技术和质量同步,已成为香港及中国钣金机械制造业的行内先驱。目前销售遍布欧美,东南亚等国家。

本公司荣获ISO9001:2008国际质量管理体系认证,国家质检总局对本公司出口机电产品质量许可证考核,并鉴定为优等及第一等产品类别,荣获中国进出口质量认证中心CQC质量管理体系认证。

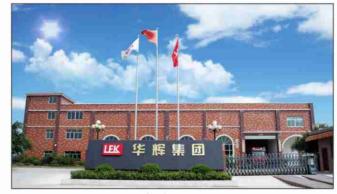
LFK香港梁发记机械集团公司其下3间下属公司,已发展成为集科研、开发、生产、销售以及服务于一体的高新科技企业。1992年自置30000平方米厂房,成立了东莞华辉数控机床有限公司,在位于交通便利的广东省东莞市清溪镇。2008年2月自置70000多平方米厂房,成立了信宜华辉数控机床有限公司。2014年11月自置10000多平方米厂房,成立了信宜协华精密钣金有限公司。现共有600多名人员。在管理方面采用全电脑的管理体系。具有先进的技术、优良的品质、优质的服务、赢得了广大客户的赞誉。

LFK Machinery Co., Ltd, was founded in the early sixties in Hong Kong, we are specializing in the production of sheet metal machineries. LFK brand machineries as: Laser cutting machine, CNC Turret Punch Press, CNC Press Brake, CNC Shearing machine, CNC V-Cut machine and so on. We adopt the international standards in Mechanical and hydraulic components, and adopt the advanced CAD/CAM computer aided design of sheet metal management software solutions. Therefore, We established a leading position in the market.

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We are granted the ISO9001: 2008 international quality management certification. We are success in getting the export of electromechanical products quality license assessment from the General Administration of Quality Supervision, Inspection and Quarantine Bureaus and classified as superior and first-class products. We also achieve the China import and export quality certification center CQC quality management certification.

信宜华辉数控机床有限公司 Xinyi Huahui CNC Machinery Co., Ltd.



华辉集团 LFK Machinery Group

一万年太久,只争朝夕。LFK一个永远开拓的先驱者。在钣金机器数控化程度受到高度重视的今天,我们能为尊敬的用户做些什么?因为这个问题,我们不断探索变革不断投入资源。作为全国唯一全面开发制造金属板材加工设备的领先企业,LFK带给用户的是高精数控设备加工的全新体验。当你为了降低生产成本向LFK寻求支持,你将到一套提高性能的定制解决方案和持续的增值服务,这是欧美企业无法做到的。这证明了,优越的性价比和全方位的售后服务使LFK的全线钣金机械比国外同类产品更不会量和附加值为突破口,摆脱市场无序竞争,走向可持续发展道路,把我们的理念、技术、服务带给相信我们的用户,帮助他们在自己的领域上脱颖而出,实现双赢。

# 未来展望 Future Prospect

The new century is full of competitions.LFK has developed an impressive image of high performance products in the sheet metal working industry. With the fast emergence of the automation in the sheet metal working industry today. We always ask ourselves "What is the tactic to care about the changes?"To find the answer, we keep technological innovation and resources optimizing. We are dedicated to invent more superior high-end CNC sheet metal working machinery.In addition, we can offer comprehensive customize, performance-based solutions and continuous after sales services, which the competitors abroad is not in a position to satisfy. Strategic speaking, LFK is your single and indispensable partner in the sheet metal working industry here. In future, we will keep our mission to enhance and improve our existing products while developing the new ones which will bring satisfaction to our faithful customers and succession to our dealers. The total solution strategy and comprehensive value-added service is significant to isolate ourselves from the impervious market competition. Furthermore, we will convey our business concept, technology innovation and service expertise to our respective customers,in achieving their full potential in the whole sector of sheet metal working industry with mutual trust and benefit.





### 装配车间 Assembly Workshop

一流的设备需要合理规范的运作模式。一直以来,我们一系统的运营观念来集成管理,从提高整个系统效率指导单项生产的进行,保证各生产要素取得平衡,使整个生产装配工序连续有效的衔接来完成产出。

The first class equipments should work together with the scientific and prescriptive operation mode. We always endeavor to integrate all process into a management system, to improve the efficiency of the whole system and to supervise each process of production. Only to achieve the balance in all production factors, the assembly process will work in harmony with other process effectively.



### 生产设备 Production Facilities

一流的设计技术需要一流的加工工艺来确保制造出可以信赖的高质量的钣金设备。我们引进一批外国进口的精密工作母机,包括大型落地镗铣床、龙门型、立式及卧式加工中心、数控车床、数控火焰切割机、精密大型平面、外圆及导轨磨床等。同时我们拥有振动时效、高周波热处理及红外线测量仪等关键检测设备,保证了产品加工精度和装配质量。

Our factory is equipped with imported and high-end production equipment, including large moving column milling and boring machine, gontry, vertical & horizontal machining centre, CNC oxy cutting machine, CNC lathe, big surface, cylindrical and dovetail grinding machine, vibration and high frequency heat treat equipment and high precision infrared measuring equipment. By and large, the first class design and the perfect machining techniques enable us to offer excellent products with high reliability and productivity.



## 生产车间

Workshop

### Nicolás Corred 、 Awea 等大型加工中心, 有效完成设备机架的整体加工,

这样极大地提高了加工精度和装配精度。而整体高精加工的机架具有足够刚性,来保证以高标准的质量控制体系,满足了广大客户的需求。

Our Nicolas Correa, Awea & other large CNC machining centers, can machining the large frames in one stop process that can make our whole large machine frames in more accuracy, that enhance our machines assembling in more efficient & precision amount our competitors. Therefore, it meets the high requirement of our customers.











03

# 光纤激光切割机

### **Fiber Laser Cutting Machine**

### 敞开式 Open Type



### 技术参数 Technical Specifications

| 12/11/2 X 11    | connear specimeatro.                 |         |                    |                    |
|-----------------|--------------------------------------|---------|--------------------|--------------------|
| 参数名称 Tecl       | hnical Specifications                | 单位/Unit | FLC500             | FLC700             |
| 切割板材厚度          | 铁 MS                                 | mm      | 6                  | 8                  |
| Cutting thickne | r锈钢 SS                               | mm      | 3                  | 4                  |
| 定位精度            | Cutting Accuracy                     | mm      | ±0.03              | ±0.03              |
| 最大定位速度          | Max. positioning speed               | mm      | 100                | 100                |
| 最大加速度           | Max. acceleration                    | G       | 1.5                | 1.5                |
| X轴行程            | X axis track                         | mm      | 1500               | 1500               |
| Y轴行程            | Y axis track                         | mm      | 3000               | 3000               |
| Z轴行程            | Z axis track                         | mm      | 100                | 100                |
| 激光器功率           | Laser Power                          | W       | 500                | 700                |
| 工作台最大载重         | Max load of worktable                | kg      | 250                | 250                |
| 机床重量            | Machine Weight                       | kg      | 4500               | 4500               |
| 外形尺寸            | $Dimension(W {\times} D {\times} H)$ | mm      | 4500 × 4500 × 1650 | 4500 × 4500 × 1650 |

注: 规格如有任何升级或改动,恕不另行通知。

# 产品介绍

Product

### 包围式带自动交换台 Automatic Interchange Able Units With Bracketing



#### 技术参数 Technical Specifications

| _ |                |   |         |         |           |         |         |
|---|----------------|---|---------|---------|-----------|---------|---------|
| 参 | 参数名称 Tech      | nical Specifications                        | 单位/Unit | FLC1000 | FLC2000   | FLC3000 | FLC4000 |
| 切 | 刀割板材厚度         | 铁 MS  | mm      | 10      | 16        | 20      | 22      |
| С | utting thickne | rss 不锈钢 SS                                  | mm      | 5       | 8         | 10      | 14      |
| 定 | 巨位精度           | Cutting Accuracy                            | mm      | ±0.03   | ±0.03     | ±0.03   | ±0.03   |
| 最 | <b>是大定位速度</b>  | Max. positioning speed                      | mm      | 100     | 100       | 100     | 100     |
| 最 | <b>是大加速度</b>   | Max. acceleration                           | G       | 2       | 2         | 2       | 2       |
| X | 轴行程            | X axis track                                | mm      | 1500    | 1500      | 1500    | 1500    |
| Y | 轴行程            | Y axis track                                | mm      | 3000    | 3000      | 3000    | 3000    |
| Z | 轴行程            | Z axis track                                | mm      | 100     | 100       | 100     | 100     |
| 激 | <b>火器</b> 功率   | Laser Power                                 | W       | 1000    | 2000      | 3000    | 4000    |
| I | 作台最大载重         | Max load of worktable                       | kg      | 500     | 800       | 1000    | 1200    |
| 机 | は床重量           | Machine Weight                              | kg      | 5500    | 9500      | 9500    | 9500    |
| 外 | 形尺寸            | $Dimension\left(W{\times}D{\times}H\right)$ | mm      |         | 9400 × 45 | 00×2200 |         |
|   |                |   |         |         |           |         |         |

注:规格如有任何升级或改动,恕不另行通知。 N.B. Subject to changes without prior notice

### 光纤激光切割系统 Cutting Systems

- \*可提供电容式切割头高度感应自动调节
- \* 光纤系统带温控保护
- \* 有10 mm 镜片焦距范围调节
- \* 切割头护盖设计方便装拆
- \* 灵活优化的光班调节
- \* 顺畅的辅助气体管道
- \*紧凑及轻巧的结构
- \* Available with and without capacitive height sensing
- \* Temperature sensors protect optics and minimize the chance of overheating
- \* 10 mm of lens movement to set focus
- \* Quick and easy access to the cover glass
- \* Flexible design to optimize spot size
- \* Smooth assist gas flow
- \* Compact, lightweight design



RAYTOOLS

### 激光切割头

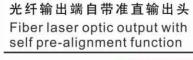
# 数控系统 CNC Controller

- \*自动调高功能 \*软件保护功能
- \*激光能量控制功能
- \*断点/断电返回功能
- \*蛙跳/自动巡边功能
- \*自适性调节功能
- \*Auto height adjustment
- \*Software protection
- \*Laser beam power control
- \*Sudden shut down point resume function
- \*Frog jump and Auto edge positioning function

# 2 L U S Barr Sein Date **AheadTechs**

#### IPG 高级光纤激光发生器 Laser Resonator







数控系统

- \* 高质量光束输出
- \*紧凑的结构设计
- \* 高电光转换效率
- \* 外部计算机控制接口
- \* High quality laser beam output
- \*高可靠性,使用寿命长 \* High reliability and durable service life
  - \* High compact construction design
  - \* High power conversion from electricity energy into laser power
  - \* I/O peripheral for PC commulcation

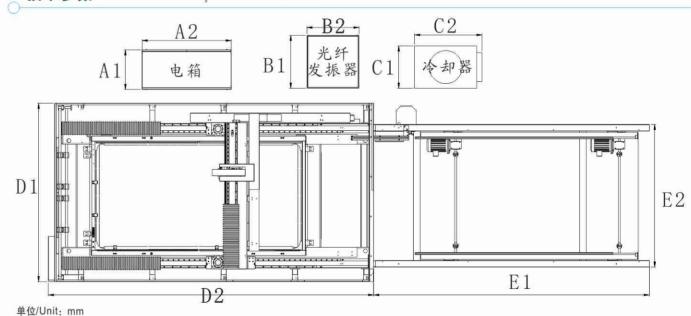


# 产品介绍

Product



#### 技术参数 Technical Specifications



| S45 1-45 S S S S S S S S S S S S S S S S S S S |            |           |            |             |           |
|--|------------|-----------|------------|-------------|-----------|
|  | A1 × A2    | B1 × B2   | C1 × C2    | D1 × D2     | E1 × E2   |
| FLC500   | 600 × 1350 | 750 × 800 | 600 × 450  | 2545 × 4700 | -         |
| FLC700   | 600 × 1350 | 750 × 800 | 600 × 450  | 2545 × 4700 | ·——       |
| FLC1000  | 600 × 1350 | 800×790   | 640 × 1020 | 2720 × 4687 | 4175×2158 |
| FLC2000  | 600 × 1350 | 800×790   | 640 × 1020 | 2720 × 4687 | 4175×2158 |

07

# 数控液压转塔冲床 **CNC Hydraulic Turret Punch Press**

#### 特点 Characteristics

- ◎ 配德国液压冲头,工作噪音低
- ◎ 每套模具可独立设定其上限点、深度下限点及冲程,在模具研磨后毋需垫片,提高工作效率
- ◎ 在整个冲压过程中恒定冲压力,在不同板厚和不同模具形状都可输出最大额定冲力
- ◎ 油压过载自动卸压,安全地保护机床及模具
- The high precision German hydraulic punching head, with very low impact noise
- © Each tool can set its own TDC, BDC and punching stroke, thus eliminating manual shimming of the punch, after regrinding
- O Constant working power independent from the stroke position of the tool, providing greater capabilities in material thickness and hole sizes. Louvers and other forming operations are achieved with greater ease
- Intrinsic protection against overload can safely protect the machine and the tooling



### 产品介绍

Product

#### 技术参数 Technical Specifications

| 型号 Model  | 单位<br>Unit | T3-1212<br>/T3S-1212 | T3-1220<br>/T3S-1220 | T3-1225<br>/T3S-1225 | T3-1520<br>/T3S-1520 | T3-1525<br>/T3S-1525 |
|---|------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| 公称压力<br>Punch Force   | Ton        |                      |                      | 30                   |                      |                      |
| 工作行程(X轴)<br>X-axis travel   | mm         | 1250                 | 2000                 | 2500                 | 2000                 | 2500                 |
| 工作行程( Y轴)<br>Y-axis travel  | mm         | 1270                 | 1270                 | 1270                 | 1520                 | 1520                 |
| 加工精度<br>Accuracy  | mm         |                      |                      | ±0.1                 | -                    |                      |
| 最大加工板材尺寸<br>Max. Sheet size   | mm         | 1270×2500            | 1270×4000            | 1270×5000            | 1520×4000            | 1520×5000            |
| X轴速度⑴<br>X traverse axis speed  | m/min      | 110                  | 100                  | 100                  | 100                  | 100                  |
| Y轴速度 <sup>(1)</sup><br>Y traverse axis speed  | m/min      | 90                   | 60                   | 55                   | 55                   | 55                   |
| 转盘转速(T轴)(1)<br>Turret rotation speed  | r/min      |                      |                      | 30                   |                      |                      |
| 冲头滑块最大行程<br>Max.puch stroke   | mm         |                      |                      | 32                   |                      |                      |
| 最大加工板材厚度 <sup>(2)</sup><br>Max. sheet thickness   | mm         |                      |                      | 6                    |                      |                      |
| 版材最大重量<br>Max. sheet weight<br>机床外形尺寸(长×宽×高)  | kg         |                      |                      | 120                  |                      | i                    |
| Dimension (L×W×H)   | mm         | 4890×2720×2100       | 4890×4160×2100       | 4890×5200×2100       | 4890×4200×2150       | 4890×5200×215        |
| 最高冲击频率(4毫米冲程) Nibbing rates max. (4mm stroke)   | HPM        | _                    |                      | /900 (T3S系列高速        |                      |                      |
| 最高冲孔次数(1毫米中心距) (3) Hit rates max. (1mm increment) 最高冲孔次数(25毫米中心距) (3)   | HPM        |                      | W-04/2006            | /680 (T3S系列高速        | on score             |                      |
| 最高がれた数(25電末中心距)(3)<br>Hit rates max. (25mm increment)<br>工位数  | HPM        |                      | 250                  | /300 (T3S系列高速        | 冲头)                  |                      |
| Number of stations in turret<br>最大一次冲孔直径  |            |                      |                      | 30                   |                      |                      |
| Waximum punch diameter<br>油箱容量  | mm         |                      |                      | 88.9                 |                      |                      |
| Dil tank capactiy<br>数控系统   | litre      |                      |                      | 225                  |                      |                      |
| Starting St |            |                      |                      | Fanuc 0i-PD          |                      |                      |
| 数控制数<br>Controlled axis<br>供气压力   |            |                      |                      | 4                    |                      |                      |
| Compressed air pressure minimum<br>电源容量   |            |                      |                      | 6                    |                      |                      |
| Installed power   | kw         |                      | Vezak                | 30                   |                      | V W 2/2/2            |
| Machine weight  | kg         | 12000                | 12500                | 13000                | 13500                | 14000                |

(1) 机床在静态时的参数。

(2) X、Y轴的加减速度依工件的重量而定。

(3) 以冲头冲程 4 毫米时的数据。 (1) parameter of machine in static. (2) speed of X,Y axes are based on the weight of part to be work. (3) 4mm punch stroke

注:压力油及稳压器由客户购买

注:规格如有任何升级或改动,恕不另行通知。 N.B.Specifications are subject to change without notice.

N.B. Voltage stabilizer and hydraulic oil to be bought the users.



#### 日本发那科公司0iPD 数控冲床专用系统

#### Japan FANUC 0iPD CNC Control System

◎显示方式: 10.4 "TFT彩色显示

◎数控轴数:5轴(X、Y、T、C及P轴)

数控系统 CNC Controller

ODisplay: 10.4 TFT Color display

Ocontrolled axis: 5axes(X, Y, T, C, Paxis)

# 全电动伺服转塔冲床

### **Electric Servo Drive Turret Punching Machine**

#### 特点 Characteristics

近年环保节能意识提高,全电式数控转塔冲床渐渐发展成为产业的主流.目前全电动伺服转塔冲床是使用伺服马达作为致动器,无液压油污染及维护费用,具有节能环保、高速、高精度等优势,为用户创造极大的经济效益。

All-electric turret punching machine possesses advantages such as energy saving, high accuracy and clean operation. All-electric turret punching machine is driven by servo motors and therefore, less power is consumed, save cost of hydraulic oil yet without contaminate the environment, and it will provide great advantages to the users of creating more profit and good for our living world.



#### 数控系统 CNC Controller

### 日本发那科公司0iPD 数控冲床专用系统

Japan FANUC 0iPD CNC Control System

◎显示方式: 10.4 " TFT彩色显示◎数控轴数: 5轴(X、Y、T、C及P轴)

ODisplay: 10.4" TFT Color display

Ocontrolled axis: 5axes(X, Y, T, C, Paxis)





### 产品介绍

Product

#### ——由创新一代伺服马达驱动结构而成

#### By the innovative servo motor drive structure

以伺服马达控制冲杆行程的工作方式与以往的机械式、液压式相比,属于全新概念的数控式冲孔机。透过对轴速的最佳设定来提高精确度,同时,冲杆采用航太产业材料,以达到轻量化,从而大幅提高了冲打速度及大幅降低冲打音量。这种全新概念驱动结构,真正做到了超低音,高速、高精度。

Compared with the traditional mechanical, hydraulic type turret punching press, all electric servo CNC turret punching press, is the new concept CNC punching machine. Through the best setting for the axis speed to improve the precision, and further, more, LFK adopts the aerospace industry materials in the servo punching mechanism, in order to achieve lightweight but stiffness in high rigidity, which significantly improves the punching speed and reduce the punching noise, compared with the traditional punching press.





去除传统液压式, 更高效

No hydraulic, more efficient



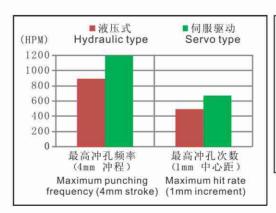
无需液压站, 更节能更低音环保

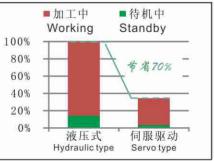
Without hydraulic power station, more energy saving more environmental protection



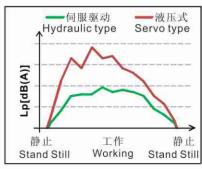
无需液压油,避免液压 油污染,更经济环保

No hydraulic oil, no oil pollution, more economic and environmental protection





耗电量比较 Comparison of power consumption



超低音加工 Reduce the punching noise



- \*可移动式控制柜,方便操作者操作,提高工作效率
- \*使用日本发那科冲床专用控制系统中文 L C D 接口,
- 独特有加工时间,件数等清楚显示 \* 特有前置存储器,可插入大容量记
- 忆卡,方便存送加工程序
- \* 专有伺服电机冲压轴控制功能:数控 系统通过系统功能,实现了冲头的伺 服电机化
- \* 标准支持100Mbps嵌入式以太网



- · Movable Control panel can be traversed to any suitable position around machine. Operator can be closer to the working area and can intervene faster to the process.
- · It is possible to check diagnostics make remote connection to control system computer through internet.

#### 技术参数 Technical Specifications

|                   | 型号 Model                                   | 单位<br>Unit | S2-1212   | S2-1225   | S3-1212         | S3-1225   |
|-------------------|--|------------|-----------|-----------|-----------------|-----------|
| 公称压力              | Punch Force                                | Ton        | 20        | 20        | 30              | 30        |
| 工作行程(X轴)          | X-axis travel                              | mm         | 1250      | 2500      | 1250            | 2500      |
| 工作行程(Y轴)          | Y-axis travel                              | mm         | 1270      | 1270      | 1270            | 1270      |
| 加工精度              | Accuracy (Tolerance of hole centers)       | mm         | ±0.1      | ±0.1      | ±0.1            | ±0.1      |
| 最大加工板材尺寸(一次重定位    | ) Max. Sheet size (with one repositioning) | mm         | 1270×2500 | 1270×5000 | 1270×2500       | 1270×5000 |
| X轴速度 (1)          | X traverse axis speed                      | m/min      | 110       | 100       | 110             | 100       |
| Y轴速度 (1)          | Y traverse axis speed                      | m/min      | 90        | 60        | 90              | 60        |
| 转盘转速(T轴)(1)       | Turret rotation speed                      | r/min      | 30        | 30        | 30              | 30        |
| 冲头滑块最大行程          | Max. puch stroke                           | mm         | 60        | 60        | 60              | 60        |
| 最大加工板材厚度          | Max. sheet thickness                       | mm         | .4        | 4         | 6               | 6         |
| 板材最大重量(2)         | Max. sheet weight                          | kg         | 120       | 120       | 120             | 120       |
| 最高冲击频率(4毫米冲程)     | Nibbing rates max. (4mm stroke)            | НРМ        |           | 12        | 00              |           |
| 最高冲孔次数(1毫米中心距)(3) | Hit rates max. (1mm increment)             | НРМ        |           | 68        | 80              |           |
| 最高冲孔次数(25毫米中心距)   | Hit rates max. (25mm increment)            | НРМ        |           | 32        | 20              |           |
| 工位数               | Number of stations in turret               |            |           | 3         | 0               |           |
| 最大一次冲孔直径          | Maximum punch diameter                     | mm         |           | 88        | .9              |           |
| 重定位置              | Automatic repositioning                    |            |           | Y         | es              |           |
| 主传动形式             | Main transmitting method                   |            |           |           | 司服马达<br>c Servo |           |
| 数控系统              | Control system                             |            |           | Fanuc     | 0i-PD           |           |
| 数控轴数              | Controlled axis                            |            |           |           | 5               |           |
| 供气压力              | Compressed air pressure minimum            | bar        |           | ĺ         | 6               |           |
| 电源容量              | Installed power                            | kw         |           | 2         | 0               |           |
| 机床重量              | Machine weight                             | kg         | 11000     | 13000     | 11000           | 13000     |

(1) 机床在静态时的参数。 (2) X、Y 轴的加减速度依工件的重量而定。 (1) parameter of machine in static. (2) speed of X, Y axes are based on the weight of part to be work. (3) 5mm punch stroke.

(3) 以冲头冲程 5 毫米时的数据。注: 規格如有任何升级或改动, 恕不另行通知。 (3) 5mm punch stroke. N.B. Specifications are subject to change

### 产品介绍

Product

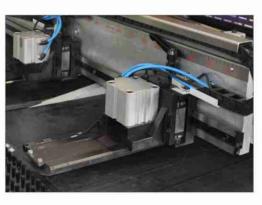
#### 高精密元件 High Precision Components



#### 夹料滑架 Sheet carriage

夹料滑架由交流伺服电机及高速滚珠丝杆直接驱动, 保证高速度移动

The carriage slides by means of preloaded ball screw and high precision linear guide way. The carriage adopts high rigid rectangular pipe structure for long lasting stability and high loading capacity ensuring high positioning accuracy at high speed



#### \* 气动夹钳 Sheet clamps

特有浮动式夹钳设计,精度高、耐用,可上下浮动配合不同平直度的板材。 Extended pneumatic clamps adopt up-down floating construction, suited for different station height to eliminate plates' deformation.

夹钳有感应板材系统, 防止脱料导致的错误冲

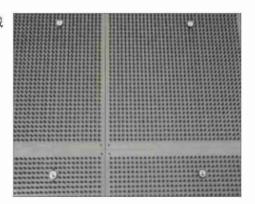
The clamps are fitted into the dovetail slide for easy movement and have high capacity to bear the load.



#### \* 混合工作台 worktable

固定硬质尼龙刷与钢球混合工作台,减 少划伤工件表面

The worktable with hard brushes and ball transfers. The brushes makes it possible to achieve low noise emission and protect the sheet against scratch.



转盘后插销气缸, 采用德国品牌 Adopt Germany Cylinder for turret positioning pin.





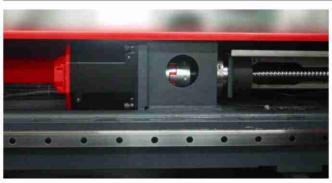
板材弯曲感应装置 有效地防止了板材 弯曲所导致的错误冲打 Sheet curing deformation

protection device in order to protect the machine from demage of punching a over curved sheet.

### 产品介绍

#### Product

#### X 轴 Y 轴的驱动及设计 The Design for X Axes & Y Axes



#### \* Y轴的驱动及设计 The Driving & Design for Y Axes

Y轴采用德国品牌滚珠丝杆和导轨; Y轴上置式设计,避免废料掉落损坏丝杆,保养简易。

All Y axes are adopt Germany ball screw and rail. Y axis ball screw is in upper position against metal scrap wearing.

#### \* X轴伺服电机马达 Servo motor

X轴伺服电机马达采用直驱设计,可高速精确运行。 Direct drive design of X-axis servo motor use, can work with high speed and precision



#### ■ 转盘 Thick turrets



转盘采用高强度铸铁, 所有工位均镶上 耐磨精钢导套。

The tool holding turrets are made of high grade cast iron. All stations in the turret are fitted with special sleeves which guarantee long lasting perfect co-axiality between punches and dies.



#### 转塔设计 Turret design



采用厚转塔双圈式设计,使用标准模具,导向性更高 Double-Track thick turret is good for standard toolings and high precision of tool guidance.

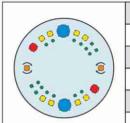
#### 分度工位 Auto-Index station



两个独立分度旋转工位, 可更灵活的 使模具冲切不同角度的复杂形状工件

The indexing device can rotate different angles of the punch and die to fit the machining demand of complex parts and greatly reduce the amount of tooling and shorten the machining time

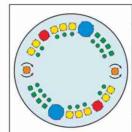
#### 30工位转盘排列 Turret configuration(30Stations)



| 模具分档<br>Tool Configuration | 工位数<br>No. | 分度工位<br>AI | 尺寸范围<br>Sizes |
|----------------------------|------------|------------|---------------|
| A •                        | 16 (4)     |            | Ø1.6~12.7mm   |
| В 🧶 💩                      | 8 (8)      | 2 (2)      | Ø12.8~31.7mm  |
| C •                        | 2(2)       |            | Ø31.8~50.8mm  |
| D •                        | 2(2)       |            | Ø50.9~88.9mm  |

( ) 带定位销之数目 ( ) keyed stations

#### 42工位转盘排列 Turret configuration(42Stations)



| 模具分档<br>Tool Configuration | 工位数<br>No. | 分度工位<br>Al | 尺寸范围<br>Sizes |
|----------------------------|------------|------------|---------------|
| A •                        | 26 (8)     |            | Ø1.6~12.7mm   |
| B 🔸 🖷                      | 10 (10)    | 2 (2)      | Ø12.8~31.7mm  |
| C •                        | 2(2)       |            | Ø31.8~50.8mm  |
| D •                        | 2(2)       |            | Ø50.9~88.9mm  |

( ) 带定位销之数目 ( ) keyed stations

#### 厚转塔型模具 Thick turret tooling



ABCD工位的模具结构简单, 组成 部分少,保证了高精度且容易管理, 使模具成本大为减少

- · Machine is designed to work "Thick Turret" Type cutting and forming tools
- · It is possible to use all kind of forming tools, Wheel, Rollerball, Scribe and Marking tools.

#### 可选购多种特殊成形模具做特殊工件 Turret Tooling(Option)

#### 凸字型 MARKING

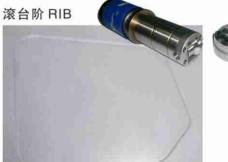




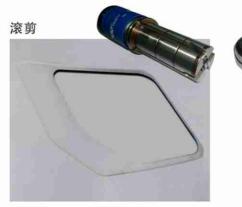


翻边 EXTRUSION









#### 画线 NIBBLING





15

# 电液伺服数控折弯机 CNC Synchronize Hydraulic Press Brake

#### ■ 特点 Characteristics

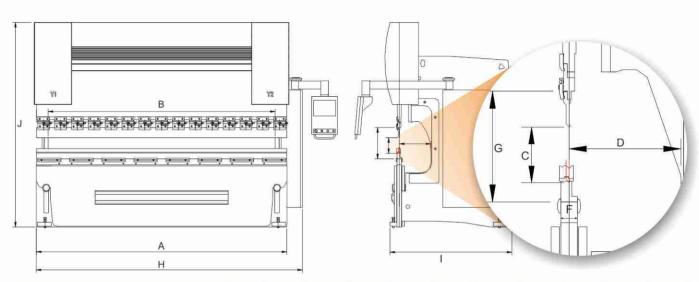
- ◎ 本机机架采用钢板焊接而成,经过振动时效消除内应力,防止机身变形
- ◎ 伺服比例阀发出的流量和电子尺的讯号反馈结合;控制滑块(Y1、Y2)同步运行
- ◎ 滑块下死点重复精度为0.01mm, 折弯角度为0.5°
- ◎ 滑块快慢速转换点及上限位停靠点通过光栅尺反馈电脑调整
- Full welded steel frame, stress relieved by vibration process
- The parallelism of the ram (Y1, Y2) achieved with the use of advanced proportional valve control and the signal feedback by the linear scales
- O Synchronization of Y1 and Y2 axis is within 0.01mm, the bending angel is 0.5°
- Adjustable speed change over point and the TDC is depend on the feedback of the position of the linear scales



# 产品介绍

Product

#### ■ 技术参数 Technical Specifications



| 西        | 발号 Model              | 单位<br>Unit | NCP<br>50-20 | NCP<br>100-32 | NCP<br>160-32 | NCP<br>160-40 | NCP<br>250-40 | NCP<br>300-40 | NCP<br>300-60 | NCP<br>400-60 | NCP<br>500-60 | NCP<br>1200-80 |
|----------|-----------------------|------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| 公称压力     | Bending Power         | Ton        | 50           | 100           | 160           | 160           | 250           | 300           | 300           | 400           | 500           | 1200           |
| 工作台长度    | Table Length (A)      | mm         | 2000         | 3200          | 3200          | 4000          | 4000          | 4000          | 6100          | 6000          | 6000          | 8000           |
| 立柱间距离    | Distance Between (B)  | mm         | 1710         | 2900          | 2880          | 3500          | 3560          | 3500          | 5250          | 5000          | 5000          | 6200           |
| 滑块行程     | Ram Stroke (C)        | mm         | 180          | 200           | 200           | 200           | 250           | 300           | 300           | 300           | 300           | 400            |
| 喉口深度     | Throat Depth (D)      | mm         | 300          | 400           | 400           | 400           | 400           | 400           | 400           | 400           | 500           | 600            |
| 工作台宽度    | Table Width (F)       | mm         | 60/200       | 60/200        | 60/200        | 60/200        | 85/200        | 85/250        | 85/250        | 300           | 350           | 600            |
| 开口高度(1)  | Daylight Opening (G)  | mm         | 370          | 400           | 400           | 400           | 450           | 600           | 600           | 600           | 600           | 700            |
| 外型尺寸(宽)  | Dimension(Width) (H)  | mm         | 2200         | 3400          | 3450          | 4200          | 4210          | 4000          | 6100          | 6000          | 6000          | 8000           |
| 外型尺寸(深)  | Dimension(Depth) (I)  | mm         | 1240         | 1500          | 1560          | 1550          | 2150          | 2140          | 2130          | 2180          | 2200          | 2500           |
| 外型尺寸(高)  | Dimension(Height) (J) | mm         | 2400         | 2610          | 2690          | 2750          | 3170          | 3200          | 3300          | 3430          | 4380          | 4225           |
| 滑块(空载)速度 | Y Rapid Speed         | mm/s       | 180          | 160           | 120           | 120           | 100           | 80            | 80            | 70            | 70            | 50             |
| 滑块(工作)速度 | Y Working Speed       | mm/s       | 10           | 10            | 10            | 10            | 8             | 8             | 8             | 7             | 7             | 5              |
| 滑块(回程)速度 | Y Return Speed        | mm/s       | 180          | 120           | 100           | 100           | 80            | 60            | 60            | 70            | 63            | 45             |
| 主电机功率    | Main Motor            | kw         | 4            | 7.5           | 11            | 11            | 15            | 18.5          | 18.5          | 22            | 30            | 45             |
| 油箱容量     | Oil Capcity           | It.        | 150          | 300           | 350           | 350           | 400           | 600           | 600           | 700           | 800           | 1200           |
| 机器重量     | Weight (Approx.)      | kg         | 4300         | 8100          | 10500         | 12000         | 17500         | 19000         | 27500         | 45000         | 47000         | 120000         |

注: (1) 工作台与滑块最大距离 Max.distance between ram and work table

规格如有变动,恕不另行通知 Design and specifications are subject to change without notice

# 双电伺服混合动力折弯机

### Twin Electric-Servo Hydrid CNC Press Brake

双向伺服马达原理

(待机时,没有动作,节能)

Bi-Direction Servo Motor Movement

(Motors are Totally Stop, when the

Press Brake is not Working)

**ENERGY**SAVING

#### ■ 特点 Characteristics

- \*双伺服电机驱动,高精度
- \*高速快下及回升速度
- \*节约能源, 环保
- \*超低热能损耗
- \*节省压力油,节省电能
- \*静止状态时, 耗电极少, 宁静
- \*Twin Servo Motor Drive, High Precision.
- \*High Rapid Approach & Return Speed.
- \*Energy Saving and Environmental Friendly.
- \*Extremely Low Heat Dissipation.
- \*Cost Saving for Electricity & Hydraulic Oil.
- \*Extremely Low Electricity Consumption & Noise when the Press Brake is Stop.

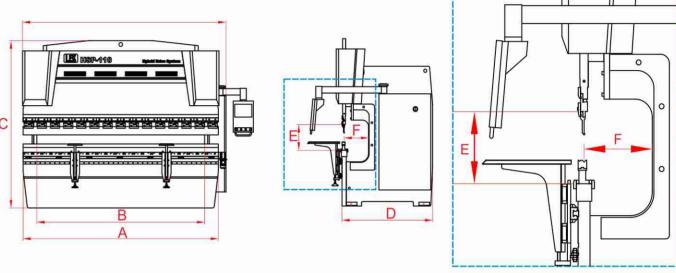


# 产品介绍

Product

#### ■ 技术参数 Technical Specifications

OIL



|         | A                          |           |           |           |           |
|---------|----------------------------|-----------|-----------|-----------|-----------|
| 西       | 발号Model                    | HSP110-32 | HSP170-32 | HSP170-40 | HSP220-40 |
| 折弯力     | Tonnage                    | 110ton    | 170ton    | 170ton    | 220ton    |
| 最大折弯长度  | Maximum Bend Length        | 3200mm    | 3200mm    | 4100mm    | 4100mm    |
| 立柱间距离   | Distance Between Frames[B] | 2750mm    | 2750mm    | 3500mm    | 3500mm    |
| 滑块行程    | Stroke Length              | 200mm     | 250mm     | 250mm     | 250mm     |
| 开口高度    | Open Heigth[E]             | 400mm     | 450mm     | 450mm     | 450mm     |
| 喉口深度    | Throat Depth[F]            | 400mm     | 400mm     | 400mm     | 400mm     |
| 工作高台度   | Table Height               | 870mm     | 940mm     | 940mm     | 940mm     |
| 快下速度    | Approach Speed             | 240mm/s   | 200mm/s   | 200mm/s   | 160mm/s   |
| 折弯速度    | Bending Speed              | 15mm/s    | 14mm/s    | 14mm/s    | 12mm/s    |
| 回升速度    | Return Speed               | 220mm/s   | 200mm/s   | 200mm/s   | 160mm/s   |
| 油箱容量    | Oil Capacity               | 80L       | 130L      | 130L      | 150L      |
| 机身长度    | Machine Lengeh[A]          | 3200mm    | 3200mm    | 4100mm    | 4100mm    |
| 机身宽度    | Machine Width[D]           | 1485mm    | 1600mm    | 1600mm    | 1650mm    |
| 机身高度    | Machine Height[C]          | 2610mm    | 2815mm    | 2815mm    | 2865mm    |
| 重量      | Approximate Weight         | 8100kg    | 11000kg   | 12000kg   | 13000kg   |
| 主电机功率   | Motor power                | 4.5kw×2   | 5.5kw×2   | 5.5kw×2   | 7.5kw×2   |
| 后管位行程   | Backgauge Range            | 600mm     | 600mm     | 600mm     | 600mm     |
| 后管位垂直行程 | Backgauge Vertical Range   | ±75mm     | ± 100mm   | ± 100mm   | ± 100mm   |
| 滑块重复精度  | Ram Repeatability          | ±0.01mm   | ±0.01mm   | ±0.01mm   | ±0.01mm   |
| 后管位重复精度 | Backgauge Repeatabiliy     | ±0.01mm   | ±0.01mm   | ±0.01mm   | ±0.01mm   |

注:规格如有任何升级或改动,恕不另行通知。 N.B.Specifications are subject to change without notice.

#### ■ 应用 Application Fields

LFK折弯机简洁的外观、实用高效、稳定可靠、高性价比、低故障率。

LFK折弯机是对金属板材进行折弯加工的自动化设备,可配合不同的模具完成复杂零件的编程和折弯加工成型。

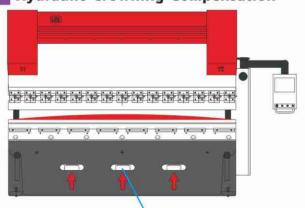
广泛应用于: 电气电柜设备、灯饰五金、汽车、家电、工程机械、专业钣金等各类机械加工行业。

LFK CNC hydraulic press brake machine inherited European design ideas, appearance, practical and efficient, reliable, high performance-price ratio and low failure rate.

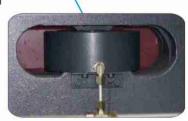
LFK Machinery is an automated equipment for bending sheet metal, which can be used to complete the programming and bending of complex parts with different molds.

Widely used in sheet metal processing, metalware, kitchen appliance, high-resolute device, electric control box, auto parts, posters, crafts and lighting.

#### 液压式挠度补偿 Hydraulic Crowning Compensation

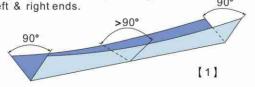


补偿油缸 Hydraulic Crowning Cylinder

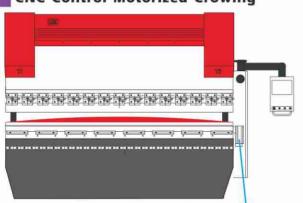


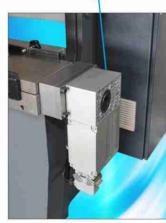
#### 【1】当无挠度补偿机构时,折弯工件 中间部分角度大于左右两端角度。

Without the crowning compensation, the middle part bending angle of the workpiece is greater than the left & right ends.



#### 机械式挠度补偿 CNC Control Motorized Crowing





#### 【2】配挠度补偿机构后折弯工作在其全 长方向上的角度及直线度均匀一致。

Equipped with the Crowing compensation, the middle of the bended work piece angle can be the same of two ends

90°

90°

#### ■ 上刀夹紧方式 Upper Tool Clamping System



传统刀夹(标配) Traditional tool-holder (standard)

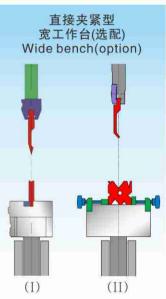


精密快速推拉夹紧型(标配) Quick Clamp(standard)

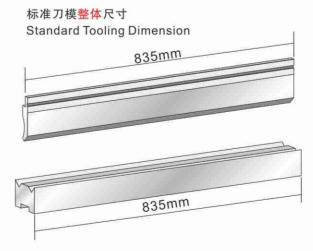


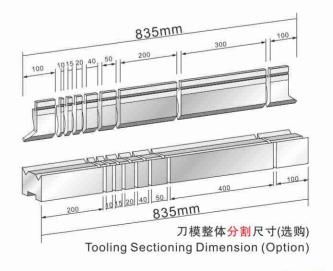
液压锁刀(选购件)Hydraulic Clamping(option)欧洲进口气动锁刀(选购件)European imports ofPneumatic Clamping(option)





#### 刀具选购 Tooling Selection





#### 瑞士数控系统 CYBELEC CNC Controller



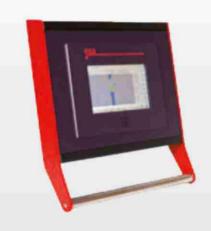
#### CYBELEC CybTouch12

- ◎页面简结,显示清析,大尺寸高对比度触摸屏。
- ◎USB接口,方便传送参数及折弯程序。
- ◎使用电脑,可进行无线互联,升极软件和备份数据。
- ◎标配轴数: Y1·Y2·X·R液压中央补偿。
- ◎2D图形显示, 手动模拟折弯程序。
- ◎ "EasyBend"页面轻松单次折弯功能。
- O Controls 4 axes.
- Offline 2D software available.
- © Easy single bends with EasyBend page.
- © 2D Touch Profile manual bend sequencing.
- OAngle, pressure and crowning management.
- OUSB port for memory stick for data transfer/backup.



- ◎19"彩色液晶触摸屏, 让编程更高效直观。
- ◎可控制18个轴。
- ◎2D或3D图形编程和模拟功能。
- ◎随机自带离线编程软件PC-ModEva。
- ◎通过简单快速地修改现有产品和功能齐全的校正页面,提高
- ◎根据碰撞检测、模具定义、板料位置,多重模拟功能提供多 种折弯解决方案。
- OLarge 19" color TouchScreen.
- OCan control up to 18 axes.
- OComplete programming of a part on a single page.
- ©2D or 3D graphic programming and simulation capability.
- ODelivered with off-line PC-ModEva software to prepare production programs and check the feasibility of parts on a desktop computer.

#### 意大利数控系统 ESA CNC Controller



#### **ESA** \$630

- ◎10.1英寸全触摸屏,大屏幕可一页式编程页面。 ◎标准可控制4+1轴。
- ◎提供7000个程序存储量及2000个模具存储量。
- ◎可以对上死点、变速点、夹紧点进行修正。
- ◎自动压力计算以及工作台补偿计算
- ◎同时支持直接角度数值、图形编程及直接进行角度 校正。
- @10" touch screen panel.
- OStandard 4 axes.
- O High-level graphic programming for esiness of
- OSophisticated algorithms to make the most of vour machine.



#### ESA S640

- ◎清晰的15寸全触摸彩色TFT屏。
- ◎标准配置可控制 4+1 轴,最多6轴。
- ◎同时支持直接角度数值、图形编程, 并且可以直 接进行角度校正。
- ◎可以对上死点、变速点、夹紧点进行修正。
- ◎自动压力计算以及工作台补偿计算
- ◎单页式编程页面,并可以切换显示到大字体页面
- @15" touch screen panel.
- Standard 4 axes, up to 6 axes control
- ©2D graphic display of machine frame, workpiece and tools.
- OInteractive 2D graphic editor for work-pieces and tools data entry.

#### ■ 荷兰数控系统 DELEM CNC Controller

#### **DELEM DA-53T**

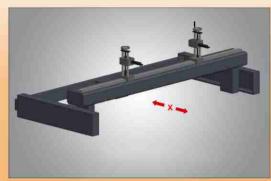
- 10.1" LCD TFT真彩显示;
- "快捷键"触摸导航:
- 最多4轴控制;
- 挠度补偿控制:
- USB外接口。
- Profile-53TL离线编程软件
- 10.1" LCD TFT colour display.
- "Hot-key" touch navigation.
- Up to 4 axes.
- Crowning control.
- USB flash memory drive.
- Profile-53TL offline software.

#### **DELEM DA-58T**

- 15" 高分辨率TFT真彩显示;
- 提供产品折弯工序模拟;
- 2D触摸式图形编程包含折弯工
- 序的自动计算和碰撞检测;
- 通过快捷方便的编程到生产的 工序,降低测试折弯时间;
- USB外设接口。
- 15" TFT, high brightness.
- 2D touch screen programming.
- Bend sequence calculation.
- Crowning control.
- USB flash memory drive.
- Including automatic bend sequence calculation and collision detection.

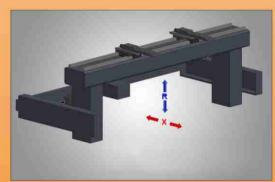
#### **DELEM DA-66T**

- ●LCD 液晶显示屏
- ●17" 高分辩率TFT真彩显示
- ●触摸式图形编程
- 角度检测传感器接口
- ●3D产品图形模拟显示
- ●多任务环境下用户程序应用
- ●USB外设接口
- Colour LCD display
- 17" TFT, high brightness
- 1280 x 1024 pixels, 32 bit colour
- Full touch screen control (IR-touch)
- 3D graphics acceleration
- Emergency switch
- USB flash memory drive

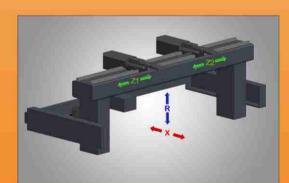


后挡料系统 Back Gauge System

1轴后挡料系统[X] 1 axis back gauge system [X]



2轴后挡料系统 [X,R] 2 axes back gauge system [X,R]

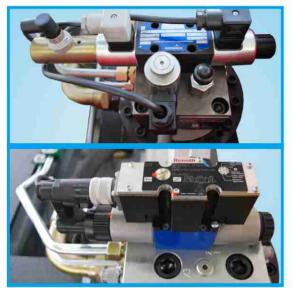


4轴后挡料系统 [X.R.Z1,Z2] 4 axes back gauge system[X,R,Z1,Z2]



6轴后挡料系统 [X1, X2, R1, R2, Z1, Z2] 6 axes back gauge system [X1,X2,R1,R2,Z1,Z2]

#### 高精密元件 High Precision Components



▲ 欧洲进口电液比例流量阀 European hydraulic components



▲ 采用德国高精度滚珠丝杆和线性导轨 X, R Axes with Germany Ball Screw & Linear Guide Way



▲ 手动快速调节滑动挡指 Manual Back Gauge Fingers



▲ 采用欧洲进口光栅尺 2 European Linear Scales are installed onto the Ram



▲ 变频式伺服油泵(选购) Variable Frequency Servo Pump Pressbrake(option)



▲ Z1, Z2 伺服控制挡指(选配) Z1, Z2 Auto-Fingers Moving on the Back Gauge (Option)

#### 前托料辅助系统 Auxiliary system



滑动式前托料架:

沿直线导轨移动,可任意位置停靠,辅助折弯 工作,提高工作效率。

Moveable front support system,

to help you to bend, make a comfortable and efficient working

#### 大型折弯机 Other Types of Press Brake





伺服数控随动前托料架AP750(选购):

辅助折弯随动前托料,为折弯精度提供辅助保障及提高加工效率。

AP750 Front auto follower support (Option):

Processing efficiency and the bending accuracy.



NCP600-70



NCP800-70

#### ■ 双机联动定制机 LFK PRESS BRAKE CUSTOM MADE PROJECTS



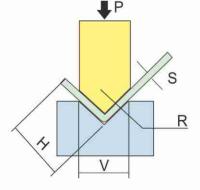
NCP250-61 双机联动 LFK NCP250-61 Tandem



NCP100-32 双机联动 LFK NCP1000-32 Tandem

#### 压力计算表 Bending Chart

| V   | H        | R    | 0.5 | 0.8 | 1  | 1.2  | 1.5 | 1.8   | 2   | 2.5   | 3    | 3.5 | 4  | 4.5 | 5    | 6  | 7    | 8  | 9  | 10 | 12 | 15  | 18  | 20  |
|-----|----------|------|-----|-----|--|------|-----|-------|-----|-------|------|-----|----|-----|------|----|------|----|----|----|----|-----|-----|-----|
| 6   | min<br>5 | 1    | 2.5 | 6.5 | 10                                       | 1.60 |     |       | -   |       |      |     |    |     |      |    | tu . |    |    |    |    |     | 120 | =5/ |
| 8   | 6        | 1.3  | 2   | 5   | 8  | 11   |     |       |     |       |      |     |    |     |      |    |      |    |    |    |    |     |     |     |
| 10  | 7        | 1.7  | 1.5 | 4   | 6  | 9    | 13  |       |     |       |      |     |    |     |      |    |      |    |    |    |    |     |     |     |
| 12  | 9        | 2    | 1.0 | 3   | 5  | 7    | 11  | 16    |     |       |      |     |    |     |      |    |      |    |    |    |    |     |     |     |
|     | ~        |      |     | 3   | 4  | 6    | 9   | 13    | 16  |       |      |     |    |     |      |    |      |    |    |    |    |     |     |     |
| 15  | 12       | 2.7  |     |     | -  | 4    | 7   | 10    | 12  | 19    |      |     |    |     |      |    |      |    |    |    |    |     |     |     |
| 20  | 15       | 3.3  | -   |     |  | 4    |     | 1,127 |     | 7.500 | 24   |     |    |     |      |    |      |    |    |    |    |     |     |     |
| 26  | 18       | 4.2  |     |     | 4  |      | 5   | 7.5   | 9   | 14    | 21   | 0.4 |    |     |      |    |      |    |    |    |    |     | -   |     |
| 30  | 22       | 5    |     |     |  |      |     | 6.5   | 8   | 12    | 19   | 24  |    |     |      |    |      |    |    |    |    |     | -   |     |
| 32  | 23       | 5.4  |     | ě   | la l |      | Ē.  |       | 7.5 | 11.6  | 17   | 23  | 30 |     |      |    |      |    |    |    |    |     | -   | -   |
| 37  | 25       | 5.8  |     |     |  |      |     |       |     | 10    | 14.5 | 20  | 26 | 33  |      |    |      |    |    |    |    |     |     |     |
| 42  | 29       | 6.7  |     |     |  |      |     |       |     |       | 13   | 17  | 23 | 29  | 35.5 |    |      |    |    |    |    |     |     |     |
| 45  | 32       | 7.5  |     |     | -  |      |     |       |     |       |      | 16  | 21 | 27  | 33   | 48 |      |    |    |    |    |     |     |     |
| 50  | 36       | 8.3  |     | v   | 161                                      |      |     |       |     |       |      |     | 19 | 24  | 30   | 43 | 58   |    | Į. |    |    |     |     |     |
| 60  | 43       | 10   |     |     |  |      |     |       |     |       |      |     |    | 20  | 25   | 36 | 49   | 64 |    |    |    |     |     |     |
| 70  | 50       | 11.5 |     |     | 150                                      |      |     |       |     |       |      |     |    |     | 21   | 31 | 42   | 55 | 69 |    |    |     |     |     |
| 80  | 57       | 13.5 |     |     |  |      |     |       |     |       |      |     |    |     |      | 27 | 37   | 48 | 60 | 75 |    |     |     |     |
| 90  | 64       | 15   |     |     |  |      |     |       |     |       |      |     |    |     |      |    | 32   | 42 | 54 | 66 | 95 |     |     |     |
| 100 | 71       | 17   |     |     |  |      |     |       |     |       |      |     |    |     |      |    |      | 38 | 48 | 60 | 86 | 134 |     |     |
| 130 | 93       | 22   |     |     |  |      |     |       |     |       |      |     |    |     |      |    |      |    | 37 | 46 | 66 | 103 | 149 |     |
| 180 | 130      | 30   |     |     | P.                                       |      |     |       |     |       |      |     |    |     |      |    |      |    |    | 33 | 48 | 75  | 107 | 133 |
|     | 145      | 33   |     |     | 0  |      |     |       |     |       |      |     |    |     |      |    |      |    |    |    | 43 | 67  | 97  | 119 |
| 250 | 27.92    | 42   |     |     |  |      |     |       |     |       |      |     |    |     |      |    |      |    |    |    |    | 54  | 77  | 95  |



 $1,42 \times \nabla \times S^2 \times L$ (Ton) 1000 V

P=加工压力(吨) ▽=抗拉强度=42kg/mm²

S=板材厚度(mm) L=板材长度=1000 (mm)

P=Capcity(Ton) V=Tensile strength=42kg/mm² S=Sheet thickness(mm) L=Sheet length=1000(mm)

V=底模V槽尺寸(mm) R=内半径

H=板材最少脚长(mm)

V=Die opening(mm) R=Internal radius H=Min.sheet bending length(mm)

# 数控液压闸式剪板机

### **CNC Hydraulic Guillotine Shear**

#### 特点 Characteristics

- ◎ 整机采用Q345钢板焊接,再由加工中心一次加工成形,经过振动时效消除内应力,机身刚性更强。
- ◎ 机身、工作台加宽,增加几何三角力量,稳定性增强。
- ◎ 采用外置弹簧压料缸,耐用性和压料稳定性增加。
- ◎ 主电机液压泵及油箱,位于机床后下方,整体外观加强,易于散热,维护。
- @ Machine frame fully welded with Q345 steel. Shape by machining center one time. Stress relieved by vibration process. Machine frame have mote rigidness
- © Widen machine frame and working table. Enhance Geometry triangle power. Stability have been
- O Hold down cylinder adopt outernal spring. Durability and stability have been enhanced.
- O Main motor with hydraulic pump and oil tank. Installed at back bottom of the machine. Enhance the overall appearance. Easy to cool and service.



#### 剪板机专用数控系统 CNC Controller



**ELGO P40T** 

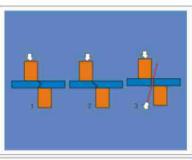
- ◎ 可控制3轴
- ◎ 直观TFT触摸屏操作
- ◎ 彩色大屏幕
- ◎ 完全控制整个剪切过程
- ◎高效、自动的功能
- ◎ 颜色搭配可自定义
- ◎ 性价比极高
- O Control axes: 3
- TFT-Display with touch operation
- Manual function
- O Single set operation
- O Program memory
- Analog outputs
- O Cut automat
- O Material depending gap, angle and pressure calculation

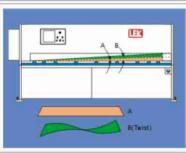


CybTouch6 of CYBELEC Switzerland(Option)

- ◎大型彩色触摸屏的直观编程。
- ◎ EasyCut 页面,快速完成简单剪切。
- ◎依据材料规格剪切功能自动计算。
- ◎剪切程序存储丰富。
- ◎自动调整刀片间隙/剪切角度、长度/后挡料退让、校正
- © Large colour touch screen for an intuitive programming.
- O Quick set up of the machine thanks to the EasyCut page.
- Automatic calculations of the shear functions upon material specifications.
- © Large cutting sequences and programs can be memorized.
- O Automatic blade gap/cutting angle/cutting length/backgauge correction/backgauge foldaway.

#### 高剪切精度 High Precision





刀片间隙 Blade gap

- 1.刀片间隙过小时剪切断面的断裂带会被挤坏,剪切力也会增大 For small blade gap, the shearing section of the sheet will be damaged and incur excessive shearing force.
- 2.刀片间隙过大时条料的弯曲和拉伸严重,毛刺增大,尺寸精度下降 For large blade gap, the cut metal strip will be bend and stretched seriously with rough cutting edge and inaccuracy.
- 3. 正常间隙

Normal blade gap.

剪切角 Cutting angle

当剪切不同规格的板材时,通过调整剪切斜度,使剪切后的条料扭曲量(Twist)达到理想状态(A)

When cutting different thickness of metal sheet, it will achieve the ideal condition (A) with minimum twist of the metal strip by adjusting different cutting angel.

#### 气动托料系统 Pneumatic Sheet Support System

#### AP1简易托料系统 IIIII

只适用机型: HHS6-32,HHS6-40

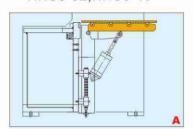
Only apply for models: HHS6-32,HHS6-40

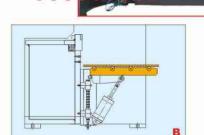


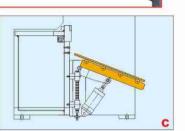
#### AP2气动托料系统(选购) IIIII

只适用机型: HHS6-32.HHS6-40

Only apply for models: HHS6-32, HHS6-40







#### 技术参数 Technical Specifications

|             |                                 | 反厚范围<br>pacity Range                 | 剪切角           | 剪次/分钟                | 后挡料最大限位                     | 压料缸数量                   | 油箱容量            | + + 10 14 15        | An etcas III   | D           | 机床尺寸<br>Dimension |             |
|-------------|---------------------------------|--------------------------------------|---------------|----------------------|-----------------------------|-------------------------|-----------------|---------------------|----------------|-------------|-------------------|-------------|
| 型号<br>Model | 普通钢<br>Mild Steel<br>(45kg/mm²) | 不锈钢<br>Stainless Steel<br>(65kg/mm²) | Cutting Angle | Stroke Per<br>Minute | Max Travel of<br>Back Gauge | Number of<br>Hold downs | Oil<br>Capacity | 主电机功率<br>Main Motor | 机床重量<br>Weight | 长<br>Length | 宽<br>Width        | 高<br>Height |
| HHS         | mm                              | mm                                   | degree        | 1/min                | mm                          | piece                   | Litre           | kw                  | kg             | mm          | mm                | mm          |
| 6-32        | 0.5-6                           | 0.5-4                                | 1-2.4°        | 8-11                 | 800                         | 17                      | 350             | 11                  | 7500           | 3970        | 1790              | 1900        |
| 6-40        | 0.5-6                           | 0.5-4                                | 1-2.4°        | 8-10                 | 800                         | 19                      | 400             | 11                  | 10500          | 4920        | 1790              | 2000        |
| 6-60        | 0.5-6                           | 0.5-4                                | 1-2°          | 6-8                  | 800                         | 26                      | 500             | 11                  | 15000          | 7000        | 1900              | 2180        |
| 8-32        | 1-8                             | 1-6                                  | 1-2.4°        | 8-10                 | 800                         | 17                      | 350             | 15                  | 11000          | 4060        | 1790              | 2000        |
| 8-40        | 1-8                             | 1-6                                  | 1-2.4°        | 8-10                 | 800                         | 19                      | 400             | 15                  | 12800          | 4950        | 1800              | 2010        |
| 8-60        | 1-8                             | 1-6                                  | 1-2°          | 6-8                  | 800                         | 26                      | 500             | 15                  | 25000          | 6945        | 1900              | 2100        |
| 10-32       | 1-10                            | 1-6                                  | 1-2.5°        | 8-14                 | 800                         | 17                      | 350             | 15                  | 11500          | 4150        | 2120              | 2070        |
| 10-40       | 1-10                            | 1-6                                  | 1-2.5°        | 8-10                 | 800                         | 19                      | 400             | 15                  | 12000          | 5040        | 2120              | 2150        |
| 10-60       | 1-10                            | 1-6                                  | 1-2.5°        | 6-8                  | 800                         | 25                      | 600             | 18.5                | 23000          | 7090        | 2100              | 2320        |
| 13-40       | 2-13                            | 2-8                                  | 1-2.5°        | 6-10                 | 1000                        | 19                      | 400             | 18.5                | 18700          | 4950        | 1900              | 2150        |
| 13-60       | 2-13                            | 2-8                                  | 1-2.4°        | 4-8                  | 1000                        | 26                      | 600             | 18.5                | 31000          | 7100        | 2460              | 2800        |
| 16-40       | 3-16                            | 2-10                                 | 1-2.5°        | 6-10                 | 1000                        | 19                      | 500             | 18.5                | 20000          | 5030        | 2460              | 2440        |
| 16-60       | 3-16                            | 2-10                                 | 1-2.4°        | 4-8                  | 1000                        | 26                      | 600             | 18.5                | 39000          | 7300        | 2540              | 2700        |
| 20-40       | 4-20                            | 2-13                                 | 1-2.5°        | 6-10                 | 1200                        | 19                      | 800             | 30                  | 38000          | 5700        | 2460              | 3000        |
| 20-60       | 4-20                            | 2-13                                 | 1-2.5°        | 4-8                  | 1200                        | 26                      | 800             | 30                  | 58500          | 7700        | 2540              | 3000        |

规格如有变动, 恕不另行通知 Design and specifications are subject to change without notice

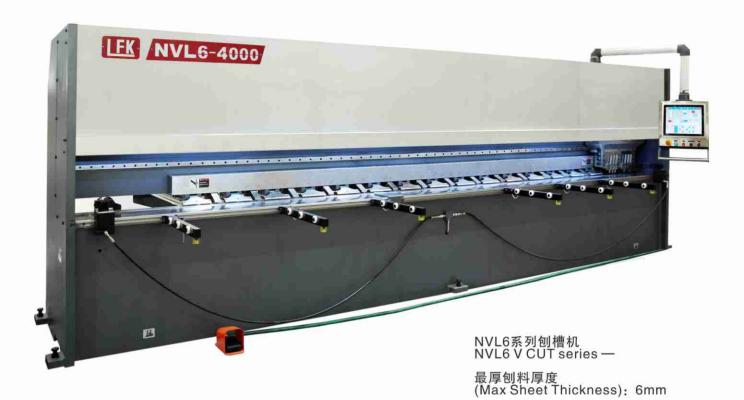
# 数控刨槽机

### **CNC V Cut Machine**



#### 技术参数 Technical Specifications

| 参数名称<br>Technical Specification      | 单位/Unit | NVL3000     | NVL4000     | NVL5000     | NVL6000     |
|--------------------------------------|---------|-------------|-------------|-------------|-------------|
| 加工板厚度<br>Sheet Thickness             | mm      | 4           | 4           | 4           | 4           |
| 加工板宽度<br>Sheet Width                 | mm      | 9-1200※1650 | 9-1200*1650 | 9-1200*1650 | 9-1200※1650 |
| 加工板长度<br>Sheet Length                | mm      | 3300        | 4300        | 5300        | 6300        |
| X轴伺服电机功率<br>X Motor-Cutting          | kw      | 5.5         | 5.5         | 5.5         | 5.5         |
| 液压压料缸数<br>No.of Hold Downs Cylinders | pcs     | 12          | 15          | 18          | 21          |
| 工作台离地高度<br>Height of Work Table      | mm      | 847         | 847         | 847         | 847         |
| 油箱容量<br>Oil Tank Capacity            | litre   | 200         | 200         | 200         | 200         |
| 机床外形尺寸(长)<br>Dimension(Length)       | mm      | 5000        | 5900        | 6800        | 7900        |
| 机床外形尺寸(宽)<br>Dimension(Width)        | mm      | 2535        | 2535        | 2535        | 2535        |
| 机床外形尺寸(高)<br>Dimension(Height)       | mm      | 2150        | 2150        | 2150        | 2300        |
| 机床重量<br>Weight (Approx.)             | kg      | 7700        | 8700        | 11000       | 12700       |



最小刨边 (Min Sheet Width): 10mm

#### ■ 技术参数 Technical Specifications

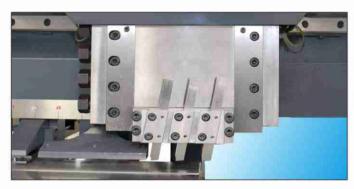
| 参数名称<br>Technical Specification      | 单位/Unit | NVL<br>6-3000 | NVL<br>6-4000 | NVL<br>6-5000 | NVL<br>6-6000 |
|--------------------------------------|---------|---------------|---------------|---------------|---------------|
| 加工板厚度<br>Sheet Thickness             | mm      | 6             | 6             | 6             | 6             |
| 加工板宽度<br>Sheet Width                 | mm      | 10-1200*1650  | 10-1200*1650  | 10-1200*1650  | 10-1200*1650  |
| 加工板长度<br>Sheet Length                | mm      | 3300          | 4300          | 5300          | 6300          |
| X轴伺服电机功率<br>X Motor-Cutting          | kw      | 7.5           | 7.5           | 7.5           | 7.5           |
| 液压压料缸数<br>No.of Hold Downs Cylinders | pcs     | 12            | 15            | 18            | 21            |
| 工作台离地高度<br>Height of Work Table      | mm      | 847           | 847           | 847           | 847           |
| 油箱容量<br>Oil Tank Capacity            | litre   | 200           | 200           | 200           | 200           |
| 机床外形尺寸(长)<br>Dimension(Length)       | mm      | 4900          | 5900          | 6900          | 7900          |
| 机床外形尺寸(宽)<br>Dimension(Width)        | mm      | 2535          | 2535          | 2535          | 2535          |
| 机床外形尺寸(高)<br>Dimension(Height)       | mm      | 2150          | 2150          | 2150          | 2150          |
| 机床重量<br>Weight (Approx.)             | kg      | 7700          | 8700          | 11000         | 12700         |

注:板厚度2mm以下时 可加工板宽9mm N.B.※Option extended back gauge N.B.Voltage stabilizer and hydraulic oil to be bought the users. N.B.Specifications are subject to change without notice.

#### 特点 Characteristics

- ◎ 刨槽速度智能编程: 0-80 m/min;
- ◎ 回程速度: 120 m/min:
- ◎ X轴使用进口高精度齿轮齿条;
- ◎ Z轴使用进口高精度滚珠丝杆螺帽;
- ◎ 高精度减速机配上高扭力高速伺服马达传动:
- ◎ 定位准确,刨槽力度强劲,进刀深度稳定。
- \* Cutting speed intelligent program 0-80 m/min;
- \* Return speed 120 m/min;
- \* X axis equip with imported high precision rack and pinion;
- \* Z axis equip with imported high precision ballscrew nut;
- \* High precision reducer machine equip with high torsion high speed servo motor transmission;
- \* Accurate Position, strong cutting, stable cutting depth.

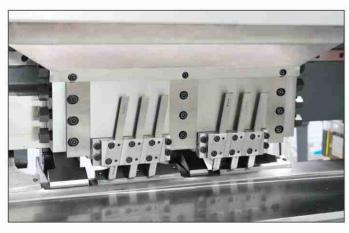




高效率切削刀架三把刨刀同时工作 The tool carriage with 3 cutters

从右边开始进刀,完成刨程后高速回程; 可选购4/5/6刨刀配置。

Cutting from right, high speed return after cutting travel; The tool carriage with 4/5/6 cutters(option).



高效率刨槽双刀架(选购)

Bi-direction cutting tool carriage (Option)

刨槽方式1:双刀架Z1,Z2同时在右边进刀刨槽至左边,完成刨程后从左边高速回程,如此巡回工作;刨槽方式2:刀架Z2从右边进刀启动刨槽,到达设定刨程后刀架Z1从左边进刀刨槽回程,如此巡回工作。

Cutting type1: cutting carriageZ1,Z2 cut from right to left at the same time, high speed return after cutting travel, cut circularly like this.

Cutting type2: cutting carriage,Z2 cut from right, when Z2 arrive the set position, to left at the same time, high speed return after cutting travel, cut circularly like this cutting carriage,Z1 start cutting from left, cut circularly like this.

刨槽加工时智能降温,有效保护刀具,增加使用寿命: 在加工不同材料上进行降温选择——1、滴水 2、吹气 3、

Intelligent cooling, when cutting, protect tools efficiently, extend usage tiem, select different cooling way depend different cutting material -----1.drip 2.blower 3.spray

#### 数控系统 CNC Controller

#### 触摸屏台湾台达编程控制器(DOP-B10S411) Colorful touch screen to program easily

- \*配备10.1"彩色宽屏,分辨率为 800\*480 TFT面板的人机界面 给用户呈现更加真实清晰丰富的画面
- \*便利的运算与通讯宏指令
- \*使用USB快速上下载程序
- \*在线/离线模拟功能
- \*记忆卡备份资料及多重保密功能
- \*Touch screen control panel.
- \*10.1" Colour screen, 800\*480TFT resolution Fast operation and communication marco machine codes.
- \*Fast program upload and download by USB.
- \*On/off line simulation function.
- \*Memory card back up and encruption function.

# 全触摸屏数控系统: 台湾HUST-A6ECH(选购) Colorful touch screen CNC system:HUST-A6ECH(option)

- \*配备17"彩色触摸屏,清晰、简易的操作界面,操作更简单,高效。
- \*根据加工方式不同,设计6种编程模式,使工作切换更加灵活,快捷。
- \*可进行后台编程,提高工作效率。
- \*使用USB接口,快捷上传和下载程序。
- \*有4G存储空间,可保存大量程式数据。
- \* 10.1" Touch screen control panel, simple and efficient.
- \* 6 kinds of programming mode according to different processing methods to make work switching more flexible and faster.
- \* Can program background to improved work efficiency.
- \* Fast program upload and download by USB.
- \* 4G memory, to save a lot of program data.





液压式板料夹钳 Hydraulic clamping system



液压式独立板料夹钳 Hydraulic independent clamp

有效行程: 1200mm Effective stroke 1200mm

可选购加长后挡料: 1650mm Extended back gauge 1650mm (Option)