PRODUCT CATALOG

产品目录

南京莱鑫自动化科技有限公司

Nanjing Listen Automation Technology Co., LTD

WC67Y 系列简易型(经济型)数控折弯机

WC67Y Series

Smple(Economical) NC Press Brake

FEATURES

性能特点

- 采用全钢焊接结构，具有足够的强度和刚性；
- 液压上传动，平稳可靠；
- 机械挡块，扭轴同步，精度高；
- 后挡料距离、上滑块行程电动调节，数字显示；
- 上模配有挠度补偿机构，提高折弯精度；
- 国产E21数控系统；
- Y轴和X轴驱动自动控制

- Complete steel -welded structure,with sufficient strength and rigidity
- Hydraulic down-stroke structure,reliable smooth
- Mechanical stop unit,synchronous torque and high precislon
- Back gauge distance and upper ram stroke with electric adjustment, and countter display
- Upper tool with tension compensating mechanism,in order to quarantee high precision of bending
- E21 NC system
- Y-axis and X-axis drive automatic control

数控系统(标配)

NC system(Standard)

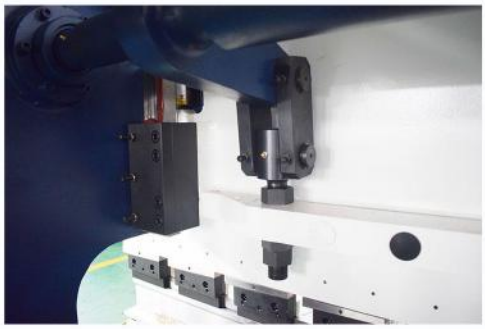
E21S

- 后挡料定位控制
- 智能定位功能
- 单向和双向定位功能，有效消除丝杆间隙
- 退让逃料功能
- 自动搜索参考点功能
- 参数一键备份与恢复功能；
- 快速位置示教功能；
- 40个多步程序存储空间，每个程序25个工步
- 断电保护功能

- Positioning control of back gauge
- Intelligent positioning control
- Unilateral and bidirectional positioning which eliminates Spindel clerance effectively
- Retract functions
- Automatic reference seraching
- One-key parameter backup and restore
- Fast position indexing
- 40 programs space,each program has 25 step
- Power-off protechtion

简易型标准配置

Standard Configuration



扭轴同步控制系统

Torque Synchronous Control System

折弯模具

Press Brake Mould

快速模夹

Fast Clamp

液压系统

Hydraulic System

主电机

Main Motor

后挡料

Backgauge

WC67K 系列扭轴同步数控折弯机

WC67K Series

Torsion-bar NC Press Brake

FEATURES

性能特点

- 主机采用WC67Y系列液压板料折弯机机构；
- 高精度、高效率扭轴同步数控折弯机；
  整机全钢板焊机结构；
- 机械扭轴同步控制左右平衡；
- 后挡料配高性能伺服电机及驱动；
- 精密滚珠丝杆、直线导轨标配

- The main machine adopts the structure of series WC67Y
- High precision,high efficiencyCNC Torsion Bar Synchro Press Brakes
- Holistic welding structure
- Stabilizes left and right balance with help of the mechanical Torsion Bar
- Back guage is drove by servo motor and performance
- Ball screw and linear quide

数控系统(标配)

NC system(Standard)

TP10S

- 10寸高清晰彩显触摸屏
- 菜单式编程界面
- 配备伺服电机
- CANopen总线控制方式，完全消除干扰定位误差
- 支持角度编程，系统自动计算板材折弯深度
- 滑块位置控制；
- 后挡料位置控制；
- 保压时间设定
- 20个程序，每个程序20工步
- 软限位功能
- 断电记忆

- 10 inch high-definition color display touch screen
- Menu based programming interface
- Equipped with servo motor
- CANopen bus control mode completely eliminates interference positioning errors
- Support angle programming, the system automatically calculates the bending depth of the sheet metal
- Slide position control
- Backgauge position control
- Pressure holding time setting
- 20 programs, each with 20 steps
- Soft limit function
- Power-off protechtion

扭轴型标准配置

Standard Configuration

扭轴同步控制系统

Torque Synchronous Control System

折弯模具

Press Brake Mould

快速模夹

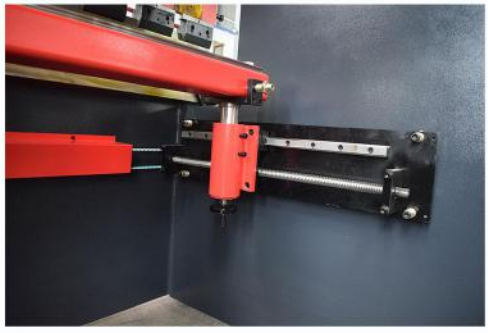
Fast Clamp

液压系统

Hydraulic System

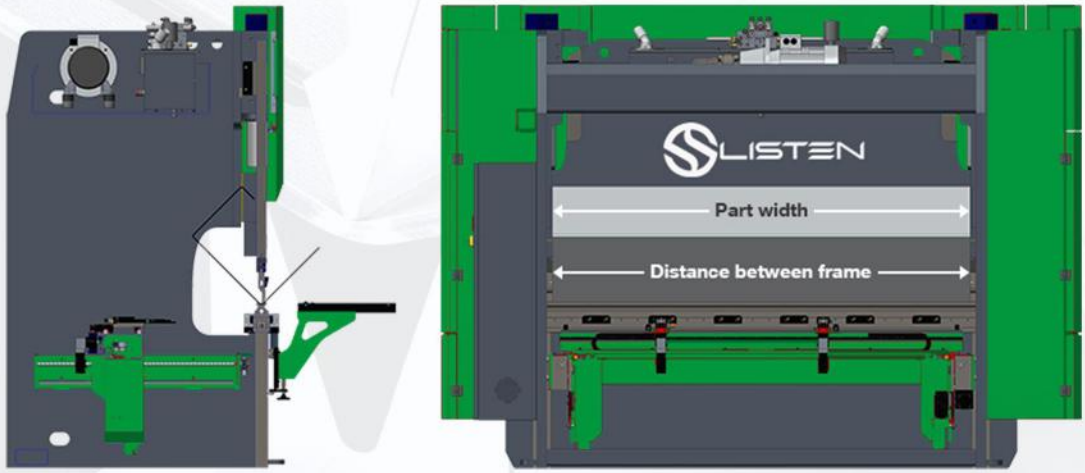
主电机

Main Motor



后挡料

Backgauge



WC67Y/WC67K系列 Technicial Specifications/折弯机技术参数

型号 Model	公称压力 Nominal Force	工作台长度 Worktable Length	立柱间距 Poles Distance	喉口深度 Throat Depth	滑块行程 Throat Depth	最大开启高度 Max Height	主电机功率 Mian Power	外形尺寸 Dimension
TYPE	(KN)	(mm)	(mm)	(mm)	(mm)	(mm)	(kw)	(mm)
40T/2200	400	2200	1870	230	100	320	4	2200X1200X1900
40T/2500	400	2500	1960	230	100	320	4	2500X1200X1900
63T/2500	630	2500	1960	250	120	320	5.5	2500X1300X2210
63T/3200	630	3200	2600	250	120	320	5.5	3200X1300X2210
80T/2500	800	2500	1960	300	120	320	7.5	2500X1400X2300
80T/3200	800	3200	2600	320	120	350	7.5	3200X1500X2300
80T/4000	800	4000	3160	320	120	350	7.5	4000X1500X2400
100T/2500	1000	2500	1960	320	140	350	7.5	2500X1600X2400
100T/3200	1000	3200	2600	320	140	400	7.5	3200X1600X2600
100T/4000	1000	4000	3160	320	140	400	7.5	4000X1600X2600
125T/3200	1250	3200	2600	320	140	400	11	3200X1600X2600
125T/4000	1250	4000	3160	320	140	400	11	4000X1600X2600
160T/3200	1600	3200	2600	320	190	460	11	3200X1700X2700
160T/4000	1600	4000	3160	320	190	460	11	4000X1700X2800
160T/5000	1600	5000	4060	320	190	460	11	5000X1900X3100
160T/6000	1600	6000	4850	320	190	460	11	6000X1900X3200
200T/3200	2000	3200	2600	320	190	460	15	3200X1950X2800
200T/4000	2000	4000	3160	320	190	460	15	4000X1950X2800
200T/5000	2000	5000	4060	320	190	460	15	5000X1950X3000
200T/6000	2000	6000	4850	320	190	460	15	6000X1950X3300
250T/3200	2500	3200	2600	400	250	590	18.5	3250X2000X3200
250T/4000	2500	4000	3160	400	250	590	18.5	4000X2000X3400
250T/5000	2500	5000	4060	400	250	590	18.5	5000X2000X3400
250T/6000	2500	6000	4850	400	250	590	18.5	6000X2000X3400
300T/3200	3000	3200	2600	400	250	590	22	3200X2000X3450
300T/4000	3000	4000	3160	400	250	590	22	4000X2000X3450
300T/5000	3000	5000	4060	400	250	590	22	5000X2000X3450
300T/6000	3000	6000	4850	400	250	590	22	6000X2000X3450
400T/3200	4000	3200	2600	400	250	590	30	3200X2180X3400
400T/4000	4000	4000	3160	400	250	590	30	4000X2180X3400
400T/5000	4000	5000	4060	400	250	590	30	5000X2180X3500
400T/6000	4000	6000	4850	400	250	590	30	6000X2180X3800
500T/5000	5000	5000	4060	400	250	590	37	5050X3500X3700
500T/6000	5000	6000	4850	400	250	590	37	6050X3500X3700
600T/4000	6000	4000	3160	400	250	590	45	4050X4500X3700
600T/6000	6000	6000	4850	400	250	590	45	6050X4500X3700

WE67K 系列电液伺服数控折弯机

WE67K Series

Electro-hydraulic servo CNC Press Brake

FEATURES

性能特点

- 机身采用整体焊接及整体加工结构，机身主要部件均采用ANSYS有限元分析软件进行分析，确保了机床的可靠性及整机的精度;
- 数控系统采用荷兰DELEM、意大利ESA或瑞士CYBELEC公司的电液伺服折弯机专用数控系统，可实现折弯角度图形编程、角度修正补偿，折弯压力自动计算与自动调整，自动计算工作台变形补偿量、工件展开长度、压底折弯压力、开口距离、后挡料自动退让等功能。

- The machine is in an overall welding and overall processing structure, and the main parts of machine are all analyzed by ANSYS finite element analysis software, which has ensured the reliability of machine and the precision of entire machine.
- The CNC control system adopts Netherland DELEM, Italian ESA, or Swiss CYBELEC products,which can achieve the functions of graphic program- ming for bending angle, compensation for angle amendment,automatic calculation also adjustment of bending pressure,automatic calculation of compensation for workbench distortion, extending length of workpieces, bending pressure for bottom bending, open distance, and automatic withdrawal of rear stopper, etc.

数控系统(标配)

CNC system(Standard)

SNC-56

- 15寸触屏显示，1920X1080高清分辨率；
- Y1-Y2-X1-X2-R1-R2-Z1-Z2+V可多达8+1轴控制；
- 支持SVP、DSVP主伺服电机控制，高效、节能、静音、省油；
- 角度编程，折弯压力自动控制，工作台挠度、板宽自动补偿；
- 100个程序，每个程序25个工步，上模、下模各15个模具库
- 单工步插入模式、大圆弧折弯功能，实用方便；
- 两边磁栅尺反馈滑块位置，精度5UM，保障折弯角度1度以内；
- 智能PID同步控制算法，实现滑块左右自动平衡；
- 系统具备物联网远程升级、远程协助、远程维护、远程故障诊断等功能。

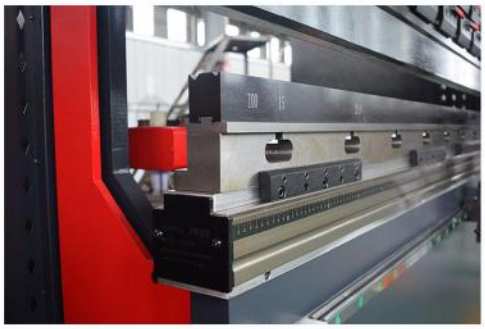
- 15 inch touchscreen display, 1920X1080 high-definition resolution;
- Y1-Y2-X1-X2-R1-R2-Z1-Z2+V can control up to 8+1 axes;
- Support SVP and DSVP main servo motor control, efficient, energy-saving, silent, and fuel-efficient;
- Angle programming, automatic control of bending pressure, automatic compensation for workbench deflection and plate width;
- 100 programs, each with 25 steps, with 15 mold libraries for the upper and lower molds
- Single step insertion mode and large arc bending function, practical and convenient;
- The magnetic grid rulers on both sides provide feedback on the slider position with an accuracy of 5UM, ensuring that the bending angle is within 1 degree;
- Intelligent PID synchronous control algorithm, realizing automatic balance of slider left and right;

电液型标准配置

Standard Configuration

电动补偿系统

Electric Crowning system



折弯模具

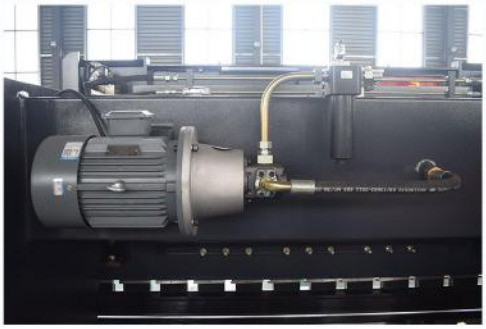
Press Brake Mould

快速模夹

Fast Clamp

液压系统

Hydraulic System

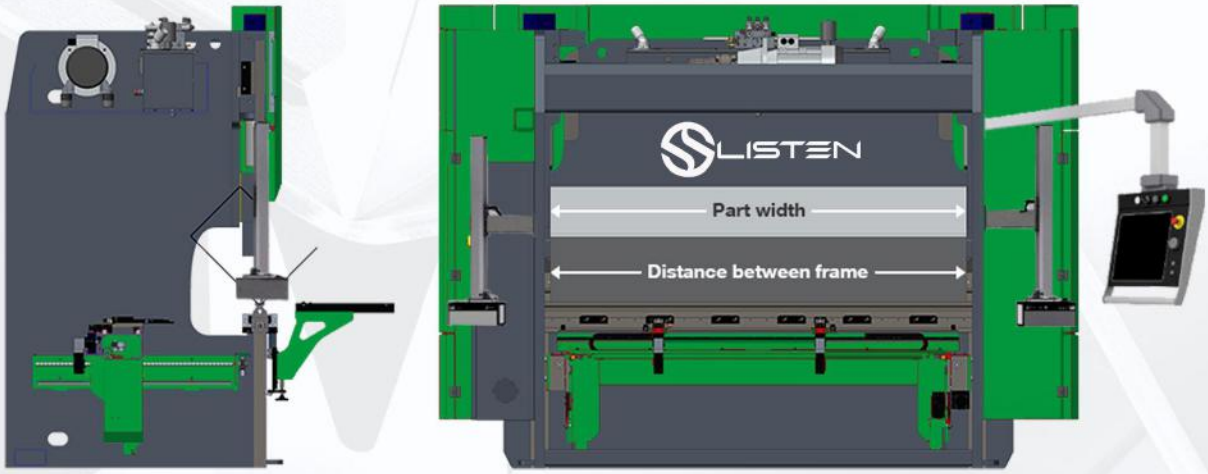


主电机

Main Motor

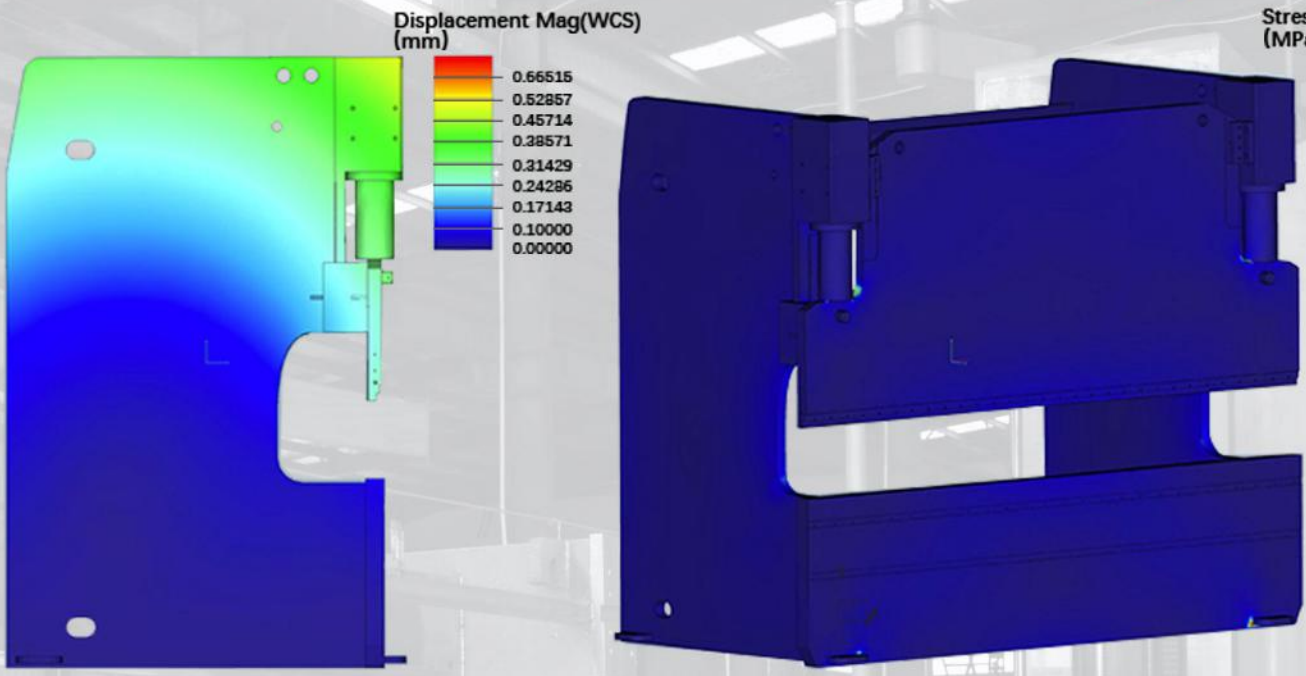
后挡料

Backgauge



WE67K系列 Technicial Specifications/折弯机技术参数

型号 Model	公称压力 Nominal Force	工作台长度 Worktable Length	立柱间距 Poles Distance	喉口深度 Throat Depth	滑块行程 Throat Depth	装模高度 Die setting heigh	主电机功率 Mian Power	外形尺寸 Dimension
TYPE	(KN)	(mm)	(mm)	(mm)	(mm)	(mm)	(kw)	(mm)
50T/1600	500	1600	1300	205	100	550	5.5	2200X1450X2155
80T/2500	800	2500	2100	350	200	570	7.5	3220X1780X2650
110T/2500	1100	2500	2100	410	200	570	7.5	3240X1780X2680
110T/3200	1100	3200	2700	410	200	570	7.5	4030X1780X2680
110T/4000	1100	4000	3300	410	200	570	7.5	4830X1780X2780
135T/3200	1350	3200	2700	410	200	570	11	4030X1790X2750
135T/4000	1350	4000	3300	410	200	570	11	4830X1790X2850
135T/5000	1350	5000	4100	410	200	570	11	5830X1790X3100
135T/6000	1350	6000	4900	410	200	570	11	6830X1790X3200
175T/2500	1750	2500	2100	410	200	570	11	3350X1800X2730
175T/3200	1750	3200	2700	410	200	570	11	4050X1800X2730
175T/4000	1750	4000	3300	410	200	570	11	4700X1800X2830
175T/5000	1750	5000	4100	410	200	570	11	5700X1800X3080
175T/6000	1750	6000	4900	410	200	570	11	6700X1800X3180
210T/3200	2100	3200	2700	410	200	570	15	4020X1850X2850
210T/4000	2100	4000	3300	410	200	570	15	4820X1850X3100
210T/5000	2100	5000	4100	410	200	570	15	5820X1850X3250
210T/6000	2100	6000	4900	410	200	570	15	6820X1850X3320
250T/3200	2500	3200	2700	410	250	570	18.5	4050X1860X3000
250T/4000	2500	4000	3300	410	250	570	18.5	4850X1860X3100
250T/5000	2500	5000	4100	410	250	570	18.5	5850X1860X3250
250T/6000	2500	6000	4900	410	250	570	18.5	6850X1860X3350
320T/3200	3200	3200	2700	410	250	600	22	4600X2260X3400
320T/4000	3200	4000	3300	410	250	600	22	5400X2260X3500
320T/5000	3200	5000	4100	410	250	600	22	6430X2260X3680
320T/6000	3200	6000	4900	410	250	600	22	7430X2260X3850



应力分析和有限元分析
Stress Analysis & Finite Element Analysis

以CAE软件SOLIDWORKS为分析工具，对压力机制动器和激光切割机机架的线性静态结构、应力和变形进行了分析。所以，对于复杂的结构、高度复杂的载荷、瞬态建模和上述组合，有限元分析是有意义的。

The CAE software SOLIDWORKS used as the method to analyze the linear static construction, stress and deformation for press brake and laser cutting machine frames. So for complicated structures, highly complex loading’s, transient modelling and combinations of the above, FEA makes sense.

加工设备
Mechanical Processes

机架经过热处理工艺以消除焊接应力。压力制动器机架采用5轴数控加工中心加工，具有单基准固定。这使所有轴保持平行，机器表面精确，为机器提供了很高的精度和寿命。

The machine frame goes through a heat treatment process for welding stress relief.press brake frames are machined with 5 axis CNC machining centers with single reference fixing. This keeps all axis parallel and the surfaces of the machine precise which provides great accuracy and longevity to the machine.

DELEM CNC Control System

DELEM DA53T Touch Color CNC System

The DA-53T touch CNC control provides a modern compact and versatile solution for a wide range of press brake applications without compromising machine functionality.

- 10.1" high resolution colour TFT
- Hot-key" touch navigation
- Up to 4 axes (Y1,Y2 + 2 aux. axes)
- Tool / material / product library
- Advanced Y-axis control algorithms for closed-loop as well as open-loop valves
- CNC Crowning contro
- USB memory stick interfacing
- Profile-53TL offline software

DELEM DA58T Color 2D graphical CNC System

The DA-58T touch CNC control provides a modern compact and versatile solution for powerful economic press brake applications.

- 15" high resolution colour TFT
- 2D graphical touch screen programming
- Up to 4 axes (Y1,Y2 + 2 aux. axes)
- Bend allowance calculation
- Advanced Y-axis control algorithms for closed-loop as well as open-loop valves
- CNC Crowning control
- USB, peripheral interfacing
- Profile-58TL offline software

DELEM DA66T Touch 2D Graphical Control

The DA-66T Touch controls feature the embed-ded, real-time Windows operating system for maximum reliability. Smooth start-ups ensured, even after instant shut-off.

- 17" high resolution colour TFT
- 2D graphical touch screen programming mode
- 3D visualisation in simulation and production
- Full Windows application suite
- Delem Modusys compatibility (module scalability and adaptivity)
- USB, peripheral interfacing
- Profile-T2D offline software
- Sensor bending & correction interface

DELEM DA69T Touch 3D Graphical Control

The DELEM DA-69T offers 2D as well as 3D programming that includes automatic bend sequence calculation and collision detection. Full 3D machine set-up with multiple tool stations giving true feedback on the product feasibility and handling.

- 17" high resolution colour TFT
- 2D and 3D graphical touch screen programming mode
- 3D visualisation in simulation and production
- Full Windows application suite
- Delem Modusys compatibility (module scalability and adaptivity)
- USB, peripheral interfacing
- Profile-T2D offline software
- Sensor bending & correction interface

CYBELEC

LISTEN

CYBELEC CNC Control System

CYBELEC CybTouch 8 PS 2D graphic CNC System

CybTouch 8 PS is intended specifically for synchronized press-brakes.As part of the CybTouch range, it has an intuitive and vivid color touch screen and a high integration of functions.

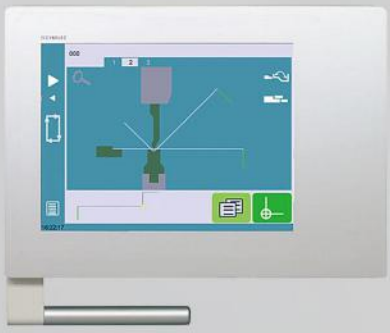
- 7" color graphic CRT screen
- 2D graphic profile creation with manual sequencing
- Up to 4 axes (Y1,Y2 + 2-axes)
- Bend allowance calculation
- Pressure – crowning calculation
- CNC Crowning contro
- Angle and back gauge correction
- Delivered with PC1200 offline software

CYBELEC CybTouch 12 PS 2D graphic CNC System

As the entire CybTouch numerical control range, CybTouch 12 PS features an intuitive touch screen user interface, offering a high integration of functions.

- 12" color graphic with fully touch screen
- Touch 2D graphic part creation with manual sequencing
- Up to 4 axes (Y1,Y2 , X, R-axes)
- Bend allowance calculation
- Pressure – crowning calculation
- Modulable tools for each part or bend
- Angle and back gauge correction
- Delivered with PC-ModEva offline software

CYBELEC CybTouch 15 PS 2D graphic CNC System

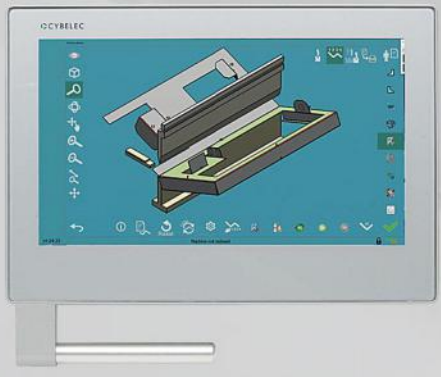


The CybTouch 15 PS is a 2D numerical control specifically dedicated for entry to mid-range CNC press-brakes. It comes in a compact housing, similarly to the well -known CybTouch range in the field, but offering a bigger touchscreen and a new horizontal design.

- 15" color graphic with fully touch screen
- Touch 2D graphical profile drawing and precise 2D program creation
- Up to 6 axes (Y1,Y2 , X, R ,Z1 , Z2-axes)
- Automatic bending sequence calculation
- Tandem management
- Modulable tools for each part or bend
- Angle and back gauge correction
- VisiTouch 2D or VisiTouch MX offline software

CYBELEC VisiTouch 19 2D and 3D graphical CNC System

The VisiTouch 19 and VisiTouch 19 MX is a 2D and 3D graphical numerical control for CNC press brakes. It aims at making the operator's work easier, even for demanding programming and setting-up tasks.

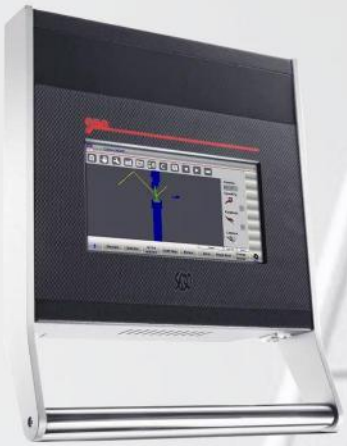


- 19" touch screen modern streamlined glass surface
- Touch 2D graphical profile drawing and precise 2D program creation
- Easy operating thanks to the user-friendly HMI
- Automatic bending sequence calculation
- Internal backup and restore functions
- Modulable tools for each part or bend
- Angle and back gauge correction
- VisiTouch 2D or VisiTouch MX offline software

esa AUTOMOTION
The Powerful CNC Intelligence

SLISTEN

ESA CNC Control System



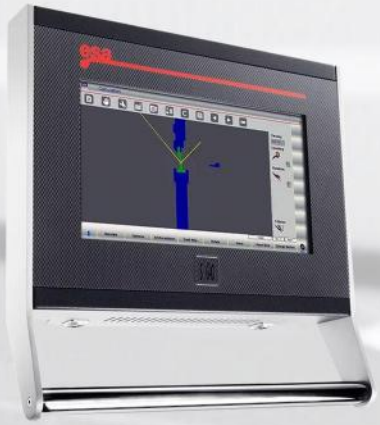
ESA S630 2D Graphical CNC System

The most powerful in its class 10’ touch screen with powerful graphic All the performances of a high-level cnc in an economical and user-friendly controller.

- 10 inch LCD touch screen (Resistive)
- Touch 2D graphic part creation with manual sequence
- Stander to 4 axis(Y1Y2,X, R)
- Automatic bending force, crowning calculation
- Modulable tools for each part or bend
- Direct angle correction, also for the crowning
- Proprotional and pressure valve Amplify intergrated
- Free off-line PC simulation software

ESA S640 2D Graphical CNC System

Top-level performances for machines up to six axes with automatic bending sequence calculations and Material Data Base for predictive compensation are available (as options) to reduce the wastage of material.



- 15 inch LCD touch screen (Resistive)
- Touch 2D graphic part creation with automatic sequence
- Stander to 4 axis, can up to 6 axis max
- Automatic bending force, crowning calculation
- Modulable tools for each part or bend
- Direct angle correction, also for the crowning
- Proprotional and pressure valve Amplify intergrated
- Free off-line PC simulation software
- Tandem machine management(option, can up to 4 machines)

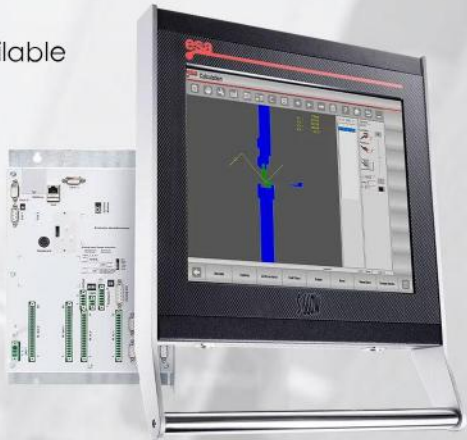
ESA S650W 2D Graphical CNC System

No limit in both performances and flexibility.
The powerful built-in Pc allows having on the machine a real 3D cad cam (metallix, radan, esa)
Finger-tip work piece design.
Direct import of tools shapes (.dxf files) and management of tool library.
Tool and die holders management.
Angle measurement and correction with all existing devices is available.

- 15 inch LCD touch screen (Resistive)
- Touch 2D graphic part creation with automatic sequence
- Stander to 4 axis, can up to 32 axis max.
- Automatic bending force, crowning calculation
- Modulable tools for each part or bend
- Free off-line PC simulation software
- Tandem machine management(option, can up to 4 machines)

ESA S660W CNC System

A totally renewed interface, specifically designed for multi touch screen, is available as an alternative to the well-known Esa interface used on S650W.
Make the best of any 3D cad cam you would like to install in the CNC.
Finger-tip work piece design.
Direct import of tools shapes (.dxf files) and management of tool library.
Tool and die holders’ management.



- 19 inch LCD touch screen (Capacitive)
- Touch 2D graphic part creation with automatic sequence
- Stander to 4 axis, can up to 156 axis max.
- Automatic bending force, crowning calculation
- Modulable tools for each part or bend
- Direct angle correction, also for the crowning
- Free off-line PC simulation software

手动快速夹具
Manual Upper Tool Clamping:

数控折弯机使用的所有原材料均由合格供应商提供，化学成分符合国际标准。因此，原材料的屈服强度和抗拉强度得到了保证。标准化了一个8.4 x 3.5毫米的安全槽，可以防止工具脱落。

CNC press brake use all Raw material is provided by qualified suppliers and chemical composition corresponds to international standards.Therefore, raw material yield and tensile strength are guara nteed.are standardized with a 8.4 x 3.5 mm safety groove, which keeps the tool from falling out.

WILA气动夹具
WILA Pneumatic Clamping:

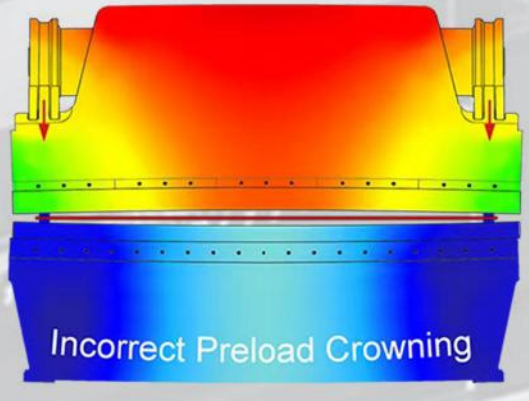
这种创新的快速夹紧系统可以满足任何需求，快速气动夹具缩短了折弯机设置时间，因此它是经常更换折弯机冲头的用户的最佳选择。

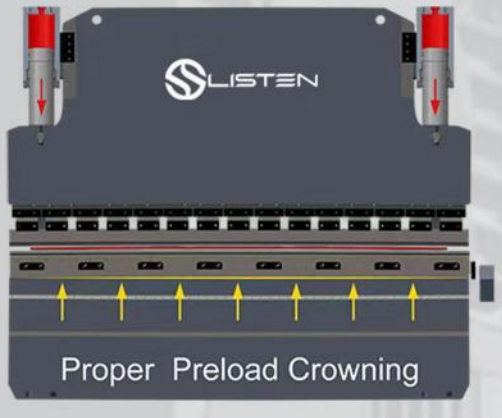
This innovative fast clamping system can satisfy any needs,the Express Air clamping reduces press brake setup time and therefore it represents the best choice for users that frequently change punches on their press brakes for sale.

WILA液压夹具
Wila Hydraulic Clamping：

威拉的“新标准”工具系统已成为威拉最先进的夹紧系统LISTEN液压机制动器在精度、质量和灵活性方面的市场领导者。

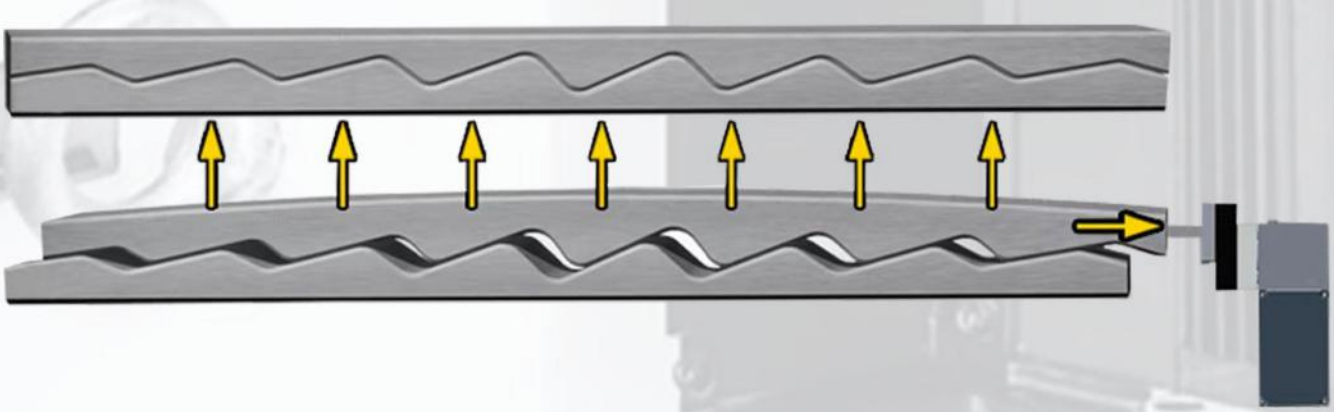
The Wila’s ‘New Standard’ Tooling System has become market leader for precision, quality and flexibility for the LISTEN hydraulic press brakes for sale, the WILA’s state-of-the-art clamp system

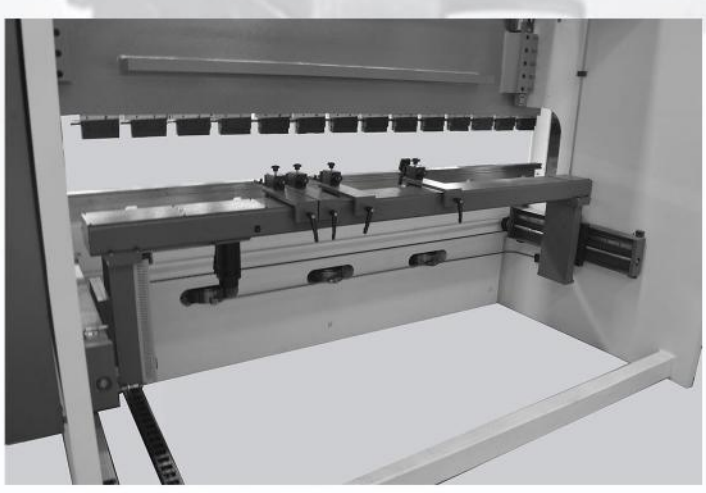




Concave

Convex





工作台补偿
Preload Crowning:

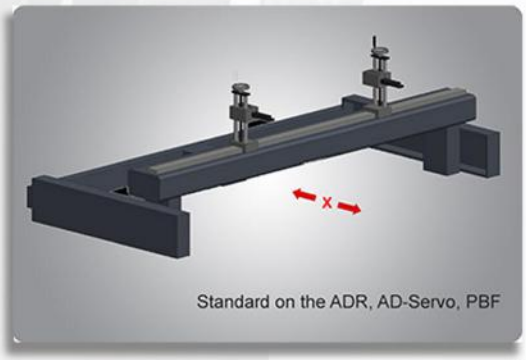
折弯过程中，滑块与工作台因受力产生一定量的变形，本机器可选择电动工作台补偿系统或则液压工作台补偿系统，对滑块变形做出相应对补偿量，使折弯机精度大幅提升，特别适合用户加工不锈钢薄板等高精度产品。

During the bending process, the slider and worktable undergo a certain amount of deformation due to force. This machine can choose an electric worktable compensation system or a hydraulic worktable compensation system to compensate for the deformation of the slider, greatly improving the accuracy of the bending machine. It is particularly suitable for users to process high-precision products such as stainless steel sheets.

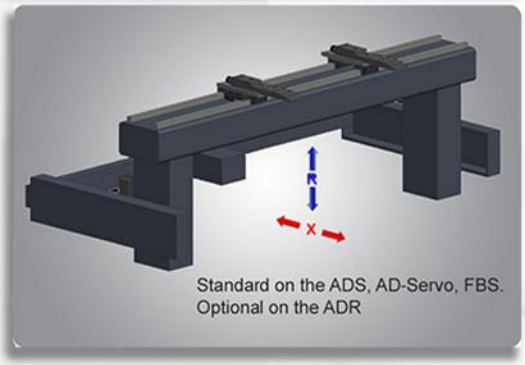
更多功能的后挡料系统

More functional back guage system

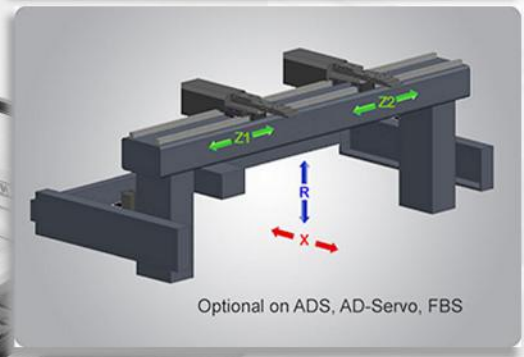
多种后挡料可供选择，更高的配置，功能更强大，操作更简便。
Multiple back gauge are available for selection, with higher configurations, more powerful functions, and easier operation.



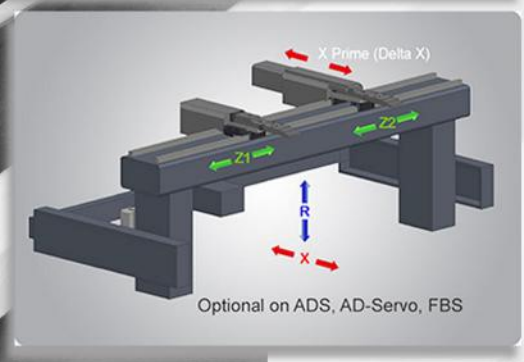
Standard on the ADR, AD-Servo, PBF



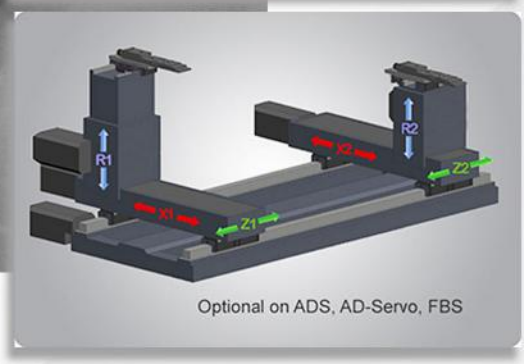
Standard on the ADS, AD-Servo, FBS.
Optional on the ADR



Optional on ADS, AD-Servo, FBS



Optional on ADS, AD-Servo, FBS



Optional on ADS, AD-Servo, FBS

激光保护装置

Laser protection device

激光保护装置可全面有效的提供折弯机的安全保护，保护操作者的人身安全。
The laser protection device can provide comprehensive and effective safety protection for the bending machine, protecting the personal safety of the operator.

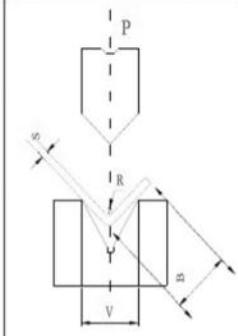
激光安全防护-DSP
Safety Devices-DSP

激光安全防护-DSP AP+MCS
Safety Devices-DSP AP+MCS

激光安全防护-MSD
Safety Devices-MSD

板料折弯压力表
List of bending pressures

板料折弯压力表 LIST OF BENDING PRESSURES	V	4	5	6	7	8	10	12	14	16	18	20	24	28	32	36	40	45	48	50	55	60	65	70	80	90	100	120
	B	2.8	3.5	4	5	5.5	7	8.5	10	11	12.5	14	17	20	22	25	28	31	32	35	38	42	46	49	56	63	70	85
	R	0.7	0.8	1	1.1	1.3	1.6	2	2.3	2.6	3	3.3	3.8	4.5	5	6	6.5	7	7.5	8	9	10	10.5	11	13	14	16	19
S	0.5	40	30	30	20																							
	0.6	60	50	40	40	30																						
	0.8		80	70	60	50	40																					
	1.0			110	100	80	70	50	50	40																		
	1.2				130	120	100	80	70	60	50																	
	1.4					160	130	110	90	80	70	70																
	1.6						170	140	120	100	90	80	70															
	2.0							220	190	170	140	130	110															
	2.2								230	250	180	160	130	110														
	2.5										230	200	170	150	130													
	3.0										330	290	240	210	180	160												
	3.5											400	330	280	250	220	200	180										
	4.0												430	370	330	290	260	230		210								
	4.5													470	410	370	330	290	280	270	250							
	5.0														510	450	410	360	350	330	300	270	250					
	6.0															650	590	520	500	470	430	390	360	340	300			
	8.0																			830	760	700	640	600	520	460	420	
	10.0																					1080	1000	930	810	720	650	
	12.0																										950	780
	14.0																										1300	1100



$$P=\frac{650S^2L}{V}$$

δ b=450KN/mm²
P-折弯力 KN　P-Bending Force(KN)
L-所折板料厚度 m　L-The width of the place(m)
S-所折板料厚度 mm　S-The thickness of the place(mm)
V-下模开口尺寸 mm　V-V-width of the bottom die(mm)

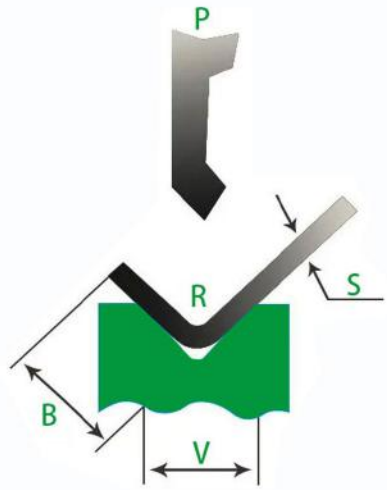
注：
1、本表按δ b=450MPa 抗拉强度的碳钢板材为依据；
2、不锈钢板：表中查出的 P 值乘以 2；
3、铝板表中查出的 P 值乘以 0.7 。

Note:
1.The table is based on the carbon steel sheet with the tension strength δ b=450MPa.
2.Stainless steel:The value of P is 2 according to the table.
3.Aluminum sheet:The value of P should be multiplied by 0.7 according to the table.

This chart is calculated according to the place of tensile strength δ b=450KN/mm² and length L=1m the force can be got according to the proportion while different kind of plate and different length to be bent.

本表数值是以材料强度 δ b=450KN/mm² 及长度 L=1m 计算所需的折弯力可按相应的比例计算而得。

折弯示意图
Bending diagram



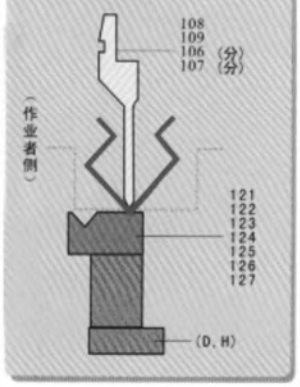
板料折弯力计算公式
Calculating Formula

P=650S²L/V(σb=450N/mm²)
P-折弯力(千牛)
S-板厚(毫米)
L-板宽(米)
V-下模槽口宽(毫米)

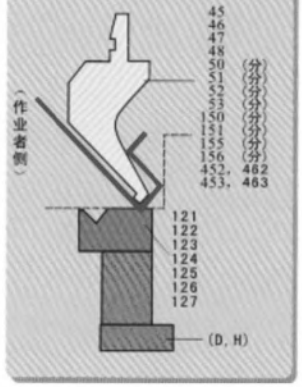
P-Bending force(KN)
S-The Thickness of the plate(mm)
L-The width of the plate(mm)
V-V-width of the bottom die(mm)

折弯机模具
Press brake mold

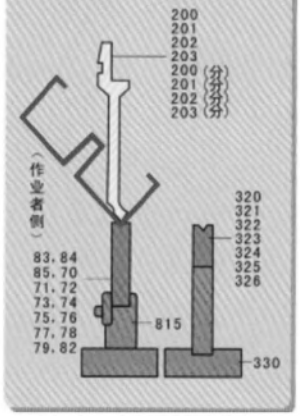
❶ 90° 折弯
板厚0.4~2.0mm



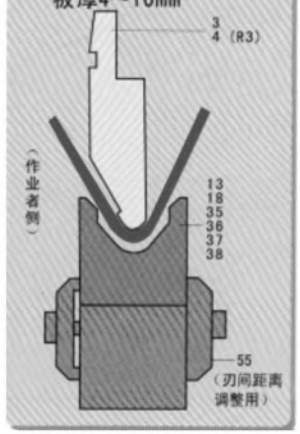
❷ 90° 折弯(鹅颈)
板厚0.4~5.0mm



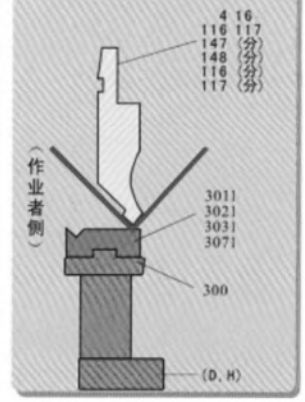
❸ 90° 折弯(框用)
板厚0.4~2.3mm



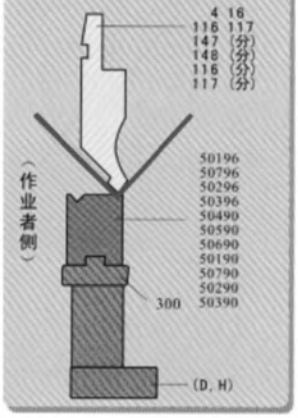
❹ 90° 折弯(厚板)
板厚4~10mm



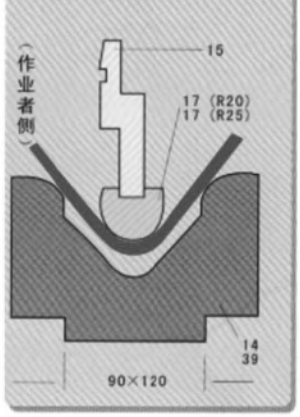
❺ 90° 折弯(低分割下模)
板厚0.4~3.2mm



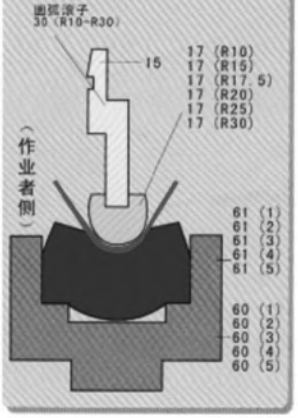
❻ 90° 折弯(同芯下模)
板厚0.4~3.2mm



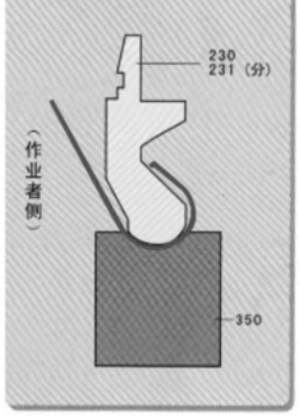
❼ 90° 折弯(特厚板)
板厚7~15mm



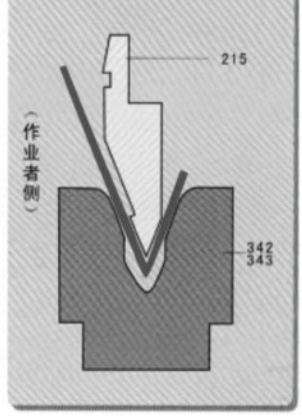
❽ 90° 折弯(优力胶型)
板厚0.4~3.2mm



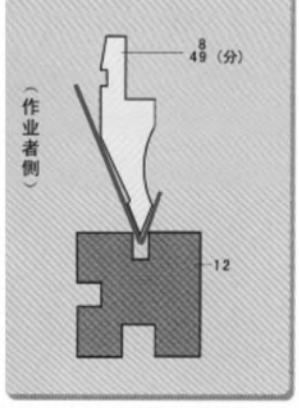
❾ R折弯(2工序型)
板厚1.2~1.5mm



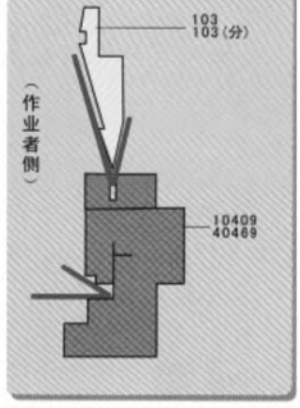
❿ 锐角折弯(厚板)
板厚4~5mm



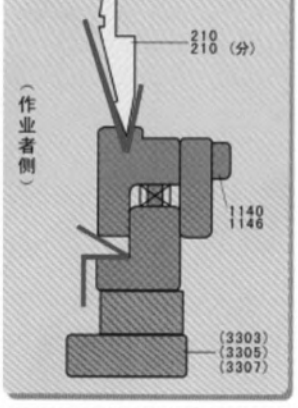
⓫ 锐角折弯(气动折弯机)
板厚0.4~3.0mm



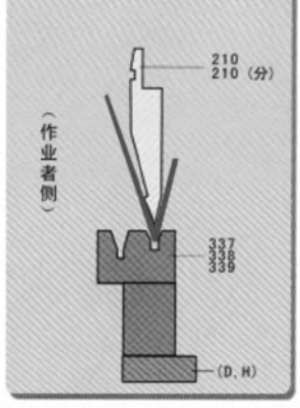
⓬ V&压边折弯
板厚0.4~1.6mm



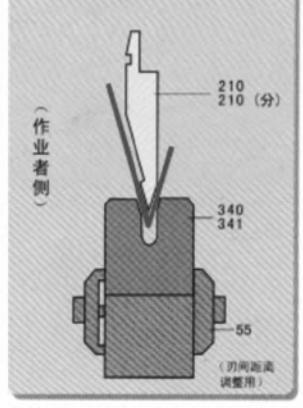
⓭ V&压边折弯(轻型下模)
板厚0.4~1.6mm



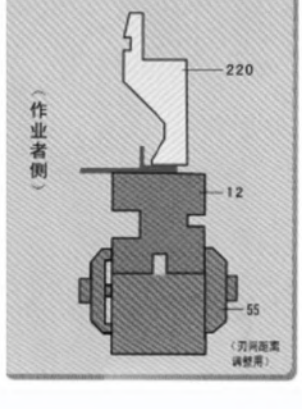
⓮ 压边折弯(前工序)
板厚0.4~2.0mm



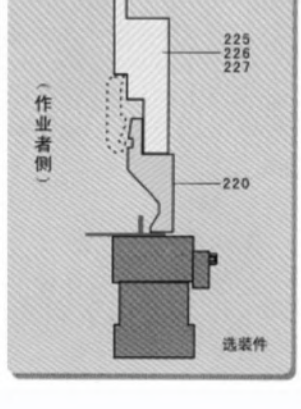
⓯ 压边折弯(前工序)
板厚2.3~3.5mm



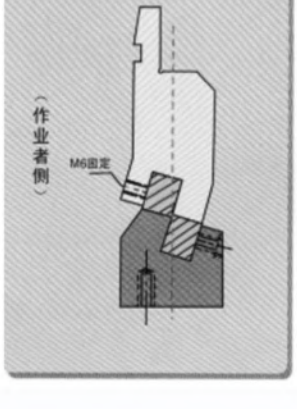
⓰ 压边折弯(完成)
板厚0.4~3.2mm



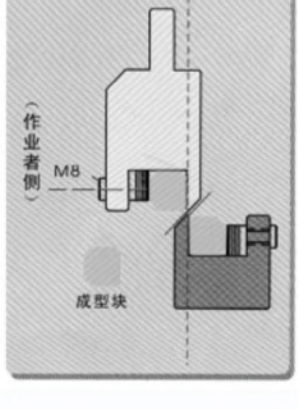
⓱ 压边折弯
板厚0.4~3.2mm



⓲ 可调式段差折弯模具



⓳ 可调式段差折弯模具



⓴ 多V国产下模