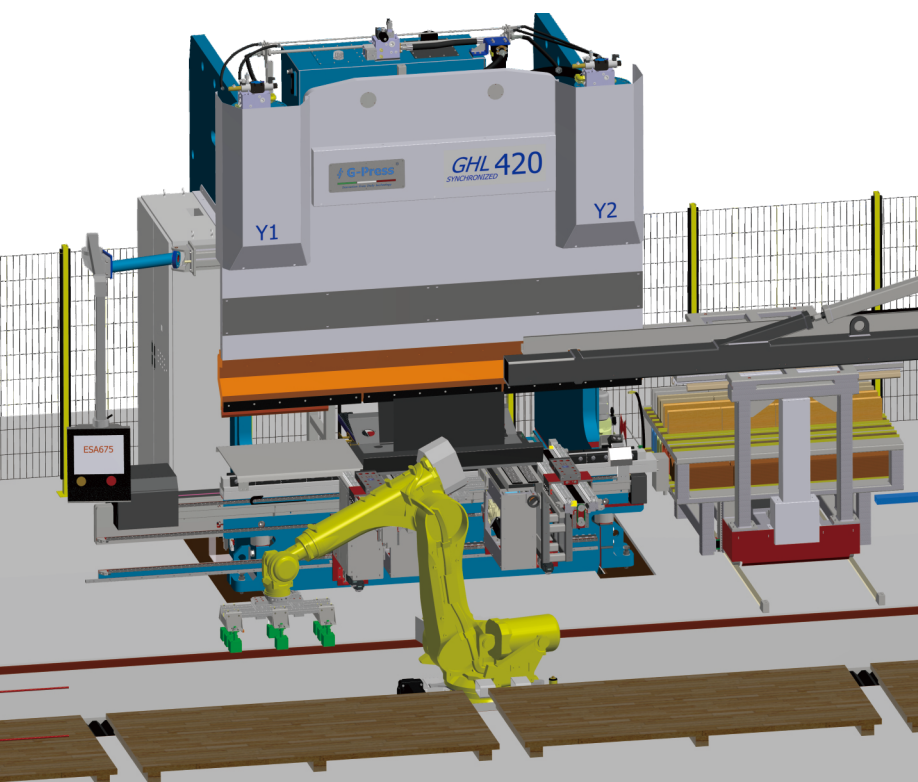


Innovation from  
Italian technology

源于意大利的钣金制造技术

 **G-Press**



折弯机

机械手折弯单元

PRESS BRAKES

ROBOTIC BENDING CELLS

GHB | GHT | IGHL | GHX\_eco | GHX  
Tandem

CN | ENG



Win-win the future

 **G-Press**®

2017



**源于意大利的钣金制造技术**  
Innovation from Italian technology



新款高配置折弯机

The 21st

1990  
The 90's



第一代机械手折弯单元

1960  
The 60's



第一代折弯机

Since



# Company profile

## 公司简介

**G-Press中国工厂—江苏弘东工业自动化有限公司**，是一家集研发、设计、生产、销售、售后为一体的技术密集型企业。生产基地兴建于2020年，厂房占地面积约为2万平方，掌握行业先进技术，着眼于海内外钣金用户高端需求市场。同时，弘东做为意大利Gasparini家族任命在中国的生产基地，为其在欧洲、南美、北美及亚太地区的销售中心提供钣金设备和全方位的技术服务。G-press工厂可满足全系列型号折弯机的生产能力，生产机型范围可覆盖25吨mini型折弯机到2000吨12米大型智能折弯机。

秉承欧洲先进设计理念，时刻关注全球先进设备零部件技术的发展，积极响应国内钣金行业的市场实际需求，并在欧洲现有技术基础上进行革新，同时发挥中国生产力的优势，使得我们能够游刃有余的为中国钣金行业开发节能、高效、超前的新技术、新产品。为客户提供高性能新型数控折弯机、伺服折弯机、大吨位折弯机、机器人折弯单元、剪板机、压铆机、激光切割机，钣金生产线，工业4.0解决方案等。

G-Press在上海、北京、山东、广东(深圳)均设立营销和售后服务中心，配备专业的销售和服务团队。

我们卖的不仅仅是设备，我们的目标是尽最大努力为每一位客户提供高附加值的技术解决方案，与客户建立长期合作共赢的关系！

G-press Productive site--Jiangsu HongDong Industrial Automation Co.,Ltd.It's a technology intensive enterprise integrating R & D, design, production and sales company.The production base and technology R&D center have build in 2020 with around 20,000 square meter.It provide service for the Italy GASPARINI family in Europe,South America,North America and the whole asia pacific area.G-press can produce the full series press brake from Mini 25Ton to 2,000Ton-12Meter large intelligent press brakes.

G-press adhere to the European advanced design concept, pay attention to the development of global advanced equipment parts technology, actively respond to the actual market demand in sheet metal industry,innovate the europe technology and supply the Chinese huge productivity capacity.We can easily provide the energy-saving, efficient,advanced technologies and new products.Such as press barkses, robotic bending cells,shearing machine, riveting machine, laser cutting machine, customized sheet metal production line and industrial 4.0 solutions.

G-press has set up the marketing and after-sale service center with professional sales and service team in Shanghai,Beijing,Shandong,Guangdong(Shenzhen).

Our goal is to do our best to provide high value-added teachnical solutions for all our customers,and establish long-term WIN-WIN cooperation relationship,not only for selling equipment.



R&D , Shanghai - China  
上海研发、销售、服务中心



Productive site - China  
中国生产基地



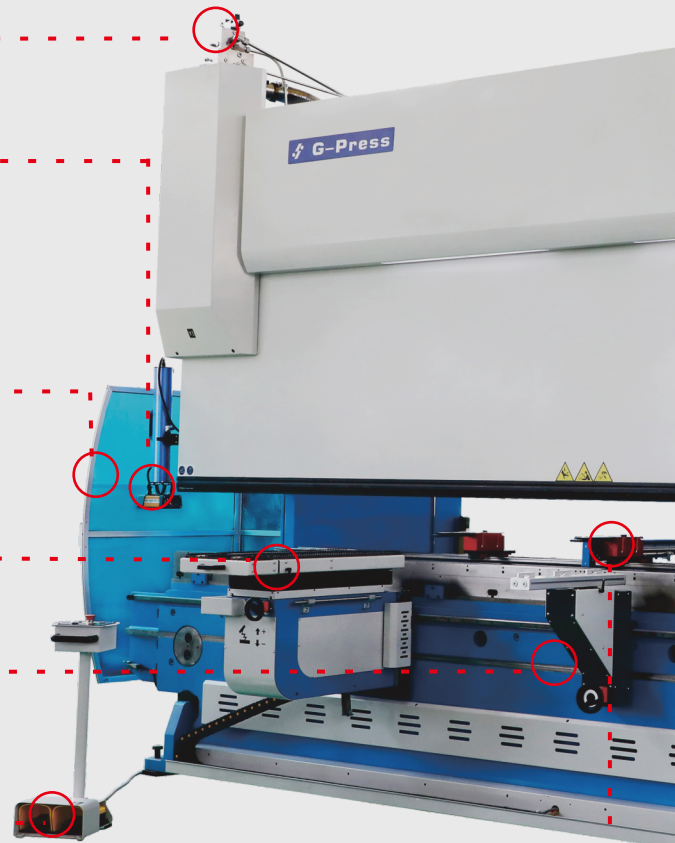
Italian R&D and sales center  
意大利研发及销售中心

# 主要配置

## Main Configuration

- 1 液压系统|Hydraulic system  
哈威|HAWAE
- 2 激光安全保护装置| Laser safety device  
\*MSD  
\*DSP  
\*DSP AP+MCS
- 3 侧防护门| lateral safety protective door  
后防护门| Rear safety protective door  
\*后保护光栅| Rear safety curtain
- 4 随动前托料| Sheet follower  
\* F11BF-01
- 5 前托料系统| Front support system  
EZ 款| Standard type  
SP 款| SP type  
\*SP rotating type
- 6 标准三挡安全脚踏  
Standard 3-position safety foot pedal
- 7 后挡料系统|Back gauge system  
标准后挡料|Standard type  
GHP-2(X-R)  
\*GHP-4(X-R-Z1-Z2)  
\*GHP-5(X-R-Z1-Z2-X5)  
\*落地式后挡料|Floor type  
GFP-6 (X1-X2-R1-R2-Z1-Z2)

后挡指 | Rear finger  
平头后挡指 | Standard type  
\* 异型后挡指 | Radius finger



\*代表选配项/Optional



CE

GH250-5000

8 数控系统|CNC system:DELEM/ESA/CYBELEC

9 上模夹具|Top tool clamping:  
GS-T.M 手动夹具| Manual clamping  
-G-Press/\*KYOKKO  
\*GS-T.H WILA液压上模夹具|Wila hydraulic top tool clamping  
\*GS-T.P 气动上模夹具|Pneumatic top tool clamping  
-G-Press/\*Rolleri

10 Reflex 结构补偿系统|Reflex structural compensation  
-GHT 系列|GHT Series  
-GHL 系列|GHL Series  
\*GHB 系列|GHB Series

11 下模夹具|Bottom tool clamping:  
GS-B.M 手动夹具| Manual clamping  
-G-Press  
\*GS-B.H 液压上模夹具|Wila hydraulic bottom tool clamping  
-G-Press/\*WILA  
\*GS-B.P 气动上模夹具|Pneumatic bottom tool clamping  
-G-Press/\*Rolleri

12 \*无线脚踏|Wireless safety foot pedal

## 主要机型 | Main model



**GHM系列**  
GHM Series



**G-HYBID系列**  
G-HYBID Series



**G-ECO系列**  
G-ECO Series



**GHX系列**  
GHX Series



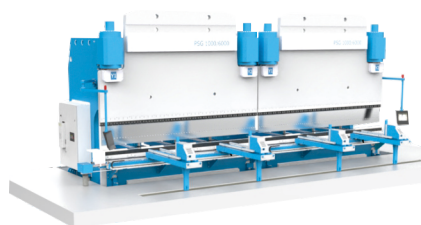
**GHB系列**  
GHB Series



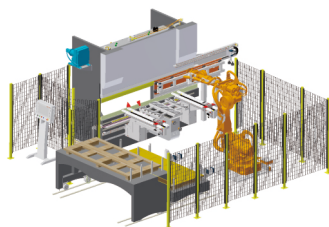
**GHL系列**  
GHL Series



**GHT系列**  
GHT Series



**Tandem 系列**  
Tandem Series



**机械手折弯单元**  
Robotic bending cells



# 迷你型折弯机

## GHM 25

GHM系列折弯机适用于加工小型钣金，设计精巧占地空间小,也被称为迷你型折弯机，广泛应用于精密仪器、电子设备制造等行业。

The GHM series press brake is suitable for bending sheet metal, with sophisticated design and small footprint. It is also known as a MINI press brake and is widely used in industries such as precision instruments and electronic equipment manufacturing.



### 特点和优势：

- 来自意大利的经典设计。
- 速度快、效率高、稳定性强。
- 适用于精密中小零件的折弯加工。
- 机身精巧占地空间小，可叉车灵活转运。
- 工作台符合人体工学设计，可坐着折弯，增加操作者工作中的舒适性。
- 折弯力250KN。
- 有效折弯长度1250MM。

### Features and advantages:

- Classic design from Italy.
- High speed, high efficiency, and strong stability.
- Suitable for bending processing of precision small and medium-sized parts.
- Compact body with small footprint and flexible forklift transportation.
- The workbench conforms to ergonomic design and the operator can bend the workpiece while sitting.
- Bending force 250KN.
- Bending length 1250MM.

### ► 技术参数 | Technical Parameters

型号 Type	折弯力 Bending force	有效折弯长度 Bending length	喉口深度 Throat depth	最大行程 Max. stroke	开启高度 Daylight	快下速度 Approaching speed	工进速度 Working speed	回程速度 Return speed	主伺服电机功率 Main servo motor power
GHM25-1250	250Kn	1250mm	46mm	150mm	340mm	220mm/s	0-12mm/s	170mm/s	5.5KW

# 全电伺服折弯机

## G-ECO Series

全电伺服折弯机采用先进的电子控制技术和伺服电机技术，通过高性能同步带轮并结合高精度滚珠丝杆的传动，实现高精度的折弯操作，是一种高精度，高效率的折弯设备。

The servo electric press brake adopts advanced electronic control and servo motor technology, and achieves high-precision bending operation through high-performance synchronous belt synchronous wheels combined with high-precision ball screw transmission. It is a high-precision and high-efficiency bending equipment.

### □ 特点和优势:

- 环保、节能、高效
- O型机架（专利设计）
- “双刹”功能
- 丝杆传动系统
- 下拉式结构
- 上滑块抗偏载机构
- 全封闭紧凑型机身
- 维护和维修成本低

### □ Features and advantages:

- Environmental protection
- "O" frame (Patent design)
- "Double brake" function
- Ball screw transmission system
- Dropdown structure
- Upper slider anti-bias loading structure
- Fully enclosed compact body
- Low cost of maintenance and repair

 **节能 安全 环保 高效**



✓ 35T    ✓ 60T

## ► 技术参数 | Technical Parameters

型号 Type	折弯力 Bending force	有效折弯长度 Bending length	喉口深度 Throat depth	最大行程 Max. stroke	开启高度 Daylight	快下速度 Approaching speed	工进速度 Working speed	回程速度 Return speed	主伺服电机功率 Main servo motor power
G-ECO35-1600 G-ECO35-2000	350Kn	1700/2100mm	∞	200mm	450mm	240 mm/s	0-15mm/s	240mm/s	18*2KW
G-ECO60-1600 G-ECO60-2000	600Kn	1700/2100mm	∞	200mm	450mm	240mm/s	0-15mm/s	240mm/s	18*2KW



# 经济型折弯机

## GHB Series

GHB系列具有操作简单、结构稳定、性价比高且折弯精度高的特点,是G-Press为客户推出的一款经济型数控折弯机。

The GHB series is an economical bending equipment with the characteristics of simple operation, structural stability, high cost-effectiveness, and high bending accuracy. It is an economical CNC press brake launched by G-Press for customers.



✓ 60T    ✓ 110T    ✓ 170T    ✓ 220T

### 特点和优势:

- 4+1轴: Y1-Y2-X-R+C
- 螺栓联接模块化机架, 无焊接应力
- 机械补偿系统B-CM
- 维护和维修成本低
- 后挡料系统GHP-2
- Ez款简易前托料
- ※REFLEX结构补偿系统
- ※安全防护装置

### Features and advantages:

- 4+1 axis: Y1-Y2-X-R+C
- Bolted modular rack, no welding stress
- Mechanical crowning system B-CM
- Low cost of maintenance and repair
- Back gauge system GHP-2(X-R)
- Front support EZ type
- ※REFLEX structural compensation
- ※Safety device

### ► 技术参数 | Technical Parameters

型号 Type	折弯力 Bending force	有效折弯长度 Bending length	喉口深度 Throat depth	最大行程 Max. stroke	开启高度 Daylight	快下速度 Approaching speed	工进速度 Working speed	回程速度 Return speed	主伺服电机功率 Main servo motor power
GHB60-2000 GHB60-2500	600Kn 600Kn	2100mm 2600mm	265mm 265mm	200mm 200mm	400mm 400mm	200mm/s 200mm/s	0-12mm/s 0-12mm/s	165mm/s 165mm/s	6.7Kw 6.7Kw
GHB110-3000 GHB110-4000	1100Kn 1100Kn	3100mm 4100mm	320mm 320mm	200mm 200mm	450mm 450mm	200mm/s 200mm/s	0-12mm/s 0-12mm/s	160mm/s 160mm/s	7.9Kw 7.9Kw
GHB170-3000 GHB170-4000 GHB170-6000	1700Kn 1700Kn 1700Kn	3100mm 4100mm 6100mm	320mm 320mm 320mm	250mm 250mm 250mm	470mm 470mm 470mm	180mm/s 180mm/s 180mm/s	0-12mm/s 0-12mm/s 0-12mm/s	163mm/s 163mm/s 163mm/s	15Kw 15Kw 15Kw
GHB220-3000 GHB220-4000 GHB220-6000	2200Kn 2200Kn 2200Kn	3100mm 4100mm 6100mm	460mm 460mm 460mm	250mm 250mm 250mm	500mm 500mm 500mm	175mm/s 175mm/s 175mm/s	0-12mm/s 0-12mm/s 0-12mm/s	165mm/s 165mm/s 165mm/s	19Kw 19Kw 19Kw

# 高配置折弯机

## GHT Series

GHT系列是一款将意大利顶端技术优势充分发挥的一款TOP型折弯机，配置高、速度快、精度高，满足客户个性需求和多元化的折弯需求。

The GHT series is a TOP type press brake that fully leverages the top technological advantages of Italy. It has high configuration, high speed, and high accuracy, meeting the personalized and diverse bending needs of customers.



### 特点和优势:

- 数控系统ESAS860/875 DELEM DA66T/69T
- 轴数6+1 (Y1-Y2-X-R-Z1-Z2+V) 起
- 螺栓联接模块化机架，无焊接应力
- REFLEX结构补偿系统，根据C形板的变形量自动消除光栅尺测量误差。
- 数控实时自动挠补系统G-CS，确保高精度折弯效果
- 多点激光安全防护装置和安全PLC: DSP AP+MCS
- 标配油温冷却系统及工业空调
- 气动上下模夹具或日本旭光快夹
- 后挡料系统GHP-4
- Sp款豪华型前托料
- 客户化定制，可进行任何高配置选型。

※随动前托料

※工业4.0

### ► 技术参数 | Technical Parameters

型号 Type	折弯力 Bending force	有效折弯长度 Bending length	喉口深度 Throat depth	最大行程 Max. stroke	开启高度 Daylight	快下速度 Approaching speed	工进速度 Working speed	回程速度 Return speed	主伺服电机功率 Main servo motor power
GHT60-2000 GHT60-2500	600Kn 600Kn	2100mm 2600mm	300mm 300mm	250mm 250mm	450mm 450mm	200mm/s 200mm/s	0-15mm/s 0-15mm/s	165mm/s 165mm/s	6.7Kw 6.7Kw
GHT125-3000 GHT125-4000	1250Kn 1250Kn	3100mm 4100mm	500mm 500mm	300mm 300mm	500mm 500mm	200mm/s 200mm/s	0-12mm/s 0-12mm/s	200mm/s 200mm/s	18Kw 18Kw
GHT185-3000 GHT185-4000 GHT185-5000 GHT185-6000	1850Kn 1850Kn 1850Kn 1850Kn	3100mm 4100mm 5100mm 6100mm	500mm 500mm 500mm 500mm	300mm 300mm 300mm 300mm	500mm 500mm 500mm 500mm	175mm/s 175mm/s 150mm/s 150mm/s	0-12mm/s 0-12mm/s 0-12mm/s 0-12mm/s	165mm/s 165mm/s 165mm/s 165mm/s	22Kw 22Kw 22Kw 22Kw

## 油电混合型折弯机

### G-HYBRID Series

G-HYBRID系列-油电混合折弯机，是GHT系列的节能升级版。

The G-HYBRID series - oil electric hybrid press brake is an energy-saving upgraded version of the GHT series.

#### □ Features and advantages:

- CNC system ESAS860/875 DELEM DA66T/69T
- Starting from axis 6+1 (Y1-Y2-X-R-Z1-Z2+V)
- Bolted modular frame with no welding stress
- REFLEX structural compensation system automatically eliminates the measurement error of the grating ruler based on the deformation of the C shaped sub-frame.
- CNC real-time automatic bending system G-CS ensures high-precision bending effect
- Multipoint laser safety protection device  
PLC: DSP AP+MCS
- Standard oil cooling system and industrial air conditioning
- Pneumatic upper and lower mold fixtures or Japanese KYOKKO quick clamps
- Back gauge system GHP-4
- Front support SP type
- Customization allows for any high configuration selection.

※Bending follower

※Industry 4.0



节省50%以上的电能!

ELECTRICITY SAVE MORE THAN 50%!

# GHX系列

## GHX Series

G-Press 2023年推出一款全新的GHX系列折弯机，整机的设计理念以客户生产的实际需求为出发点。在GHB系列的基础上，提升了设备的实用性，稳定性，安全性以及高效性，同时融合了GHT系列的技术优势，是一款高性价比，高性能的数控折弯机。G-Press launched a brand new GHX series press brake in 2023, with the overall design concept based on the actual production needs of customers. On the basis of the GHB series, the practicality, stability, safety, and efficiency of the machine have been improved, while integrating the technical advantages of the GHT series. It's a high-performance CNC press brake with high cost-effectiveness.

### 特点和优势:

- O型机架，确保了机器的高刚性，折弯过程变形量少，稳定性强。
- 有效折弯范围内无喉口限制，工件整个折弯长度上可利用空间大。
- 上梁设计采用八面导轨，具有稳定的导向性和抗偏载性能。
- 标配日本旭光快夹，可实现快速更换模具并对中
- 气动夹紧与机械扰补一体式下工作台。
- 高速、稳定且精度高的全新后挡料系统。
- 具有专利技术的防撞式后挡指结构。
- 标配德国HAWE液压系统，确保折弯机精密高效运行稳定。
- 标配折弯位置指示灯（LED Bar）
- 符合人体工学的多方位可旋转数控支臂。
- 维护和维修成本低。

### Features and advantages:

- O frame for high rigidity, minimal deformation during bending and strong stability
- No throat restriction within the effective bending range, especially length of the workpiece.
- Upper beam design adopts an eight sided guide rail, stable guidance and anti-eccentric load performance.
- KYOKKO quick clamping for punch
- Pneumatic clamping and mechanical crowning systems
- New back gauge system for high speed, stable and high-precision.
- Patented technology-collision back gauge
- HAWE hydraulic system
- Position indicator light (LED Bar).
- CNC support arm is ergonomics design.
- Low cost of maintenance and repair.



✓ 60T ✓ 120T ✓ 180T

### ▶ 技术参数 | Technical Parameters

型号 Type	折弯力 Bending force	有效折弯长度 Bending length	喉口深度 Throat depth	最大行程 Max. stroke	开启高度 Daylight	快下速度 Approaching speed	工进速度 Working speed	回程速度 Return speed	主伺服电机功率 Main servo motor power
GHX60-2000	600Kn	2100mm	—	200mm	400mm	200mm/s	0-12mm/s	165mm/s	6.7Kw
GHX120-3000 GHX120-4000	1200Kn 1200Kn	3100mm 4100mm	—	250mm 250mm	470mm 470mm	200mm/s 200mm/s	0-12mm/s 0-12mm/s	160mm/s 160mm/s	7.9Kw 7.9Kw
GHX180-3000 GHX180-4000	1800Kn 1800Kn	3100mm 4100mm	—	250mm 250mm	470mm 470mm	180mm/s 180mm/s	0-12mm/s 0-12mm/s	165mm/s 165mm/s	15Kw 15Kw



# 大吨位折弯机

## GHL Series

GHL系列折弯机是一款适合中厚板折弯的设备，融合了意大利技术，并根据客户不同需求进行二次技术开发并升级，使它的应用范围更为广泛，不同吨位设备的配置根据加工工况的需求可进行多元化选择，250T-500T特别适合与机械手衔接组合成自动化折弯单元。

The GHL series press brake is a device suitable for bending medium and thick plates, integrating Italian technology and developing and upgrading secondary technology according to different customer needs, making its application range more extensive. The configuration of equipment with different tonnage can be diversified according to the processing conditions. The 250T-500T is particularly suitable for connecting with a robotic arm to form an automated bending unit.



✔ 250T 
 ✔ 330T 
 ✔ 420T 
 ✔ 500T 
 ✔ 640T

### □ 特点和优势:

- 数控系统为高配版，如ESAS860/875 DELEM DA66T/69T
- 轴数6+1 (Y1-Y2-X-R-Z1-Z2+V) 起
- 螺栓联接模块化机架，无焊接应力
- REFLEX结构补偿系统，根据C形板的变形量自动消除光栅尺测量误差。
- 数控实时自动挠补系统G-CS，确保高精度折弯效果
- 多点激光安全防护装置和安全PLC: DSP AP+MCS
- 标配油温冷却系统及工业空调
  - ※随动前托料
  - ※前/后推料系统
  - ※落地式6轴后挡料系统
  - ※角度检测补偿系统 G-AMC

### □ Features and advantages:

- High profile CNC controller :ESAS860/875 DELEM DA66T/69T
- Axis 6+1 (Y1-Y2-X-R-Z1-Z2+V) or more
- Bolted modular frame with no welding stress
- REFLEX structural compensation system automatically eliminates the measurement error from the optical ruler based on the deformation of the C frame.
- Automatic crowning system G-CS ensures high precision bending effect
- Safety device and PLC: DSP AP+MCS
- Oil cooling system and air conditioner
  - ※Bending follower
  - ※Front and rear pushing systems
  - ※GFP-6 floor type back gauge system
  - ※Bending angle measurement system G-AMC

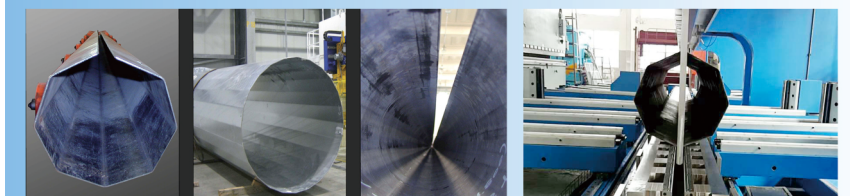
## ► 技术参数 | Technical Parameters

型号 Type	折弯力 Bending force	有效折弯长度 Bending length	喉口深度 Throat depth	最大行程 Max. stroke	开启高度 Daylight	快下速度 Approaching speed	工进速度 Working speed	回程速度 Return speed	主伺服电机功率 Main servo motor power
GHL250-3000	2500Kn	3100mm	500mm	300mm	500mm	175mm/s	0-10mm/s	150mm/s	22Kw
GHL250-4000	2500Kn	4100mm	500mm	300mm	500mm	175mm/s	0-10mm/s	150mm/s	22Kw
GHL250-5000	2500Kn	5100mm	500mm	300mm	500mm	155mm/s	0-8mm/s	130mm/s	22Kw
GHL250-6000	2500Kn	6100mm	500mm	300mm	500mm	130mm/s	0-8mm/s	130mm/s	22Kw
GHL330-3000	3300Kn	3100mm	500mm	300mm	500mm	160mm/s	0-10mm/s	140mm/s	25Kw
GHL330-4000	3300Kn	4100mm	500mm	300mm	500mm	160mm/s	0-10mm/s	140mm/s	25Kw
GHL330-6000	3300Kn	6100mm	500mm	300mm	500mm	140mm/s	0-8mm/s	120mm/s	25Kw
GHL420-4000	4200Kn	4100mm	500mm	400mm	600mm	115mm/s	0-8mm/s	150mm/s	32Kw
GHL420-6000	4200Kn	6100mm	500mm	400mm	600mm	115mm/s	0-8mm/s	150mm/s	32Kw
GHL500-6000	5000Kn	6100mm	500mm	400mm	600mm	85mm/s	0-8mm/s	90mm/s	39Kw
GHL640-6000	6400Kn	6100mm	500mm	400mm	600mm	75mm/s	0-8mm/s	90mm/s	45Kw

## 双机联动 | Press brake in Tandem

双机联动是指将两台同样配置的折弯机通过控制系统的通讯连接达到并联使用的效果，使用过程中可保证两台折弯机的Y轴同步运行，尤其适用于超长工件的折弯。同时两台折弯机也可以在不使用联动模式下相对独立工作。

Tandem press brake means linkage refers to the parallel use of two press brake with the same configuration through communication connection of the control system. During use, it can ensure the synchronous operation of the Y-axis of the two press brake, especially suitable for bending ultra long workpieces. At the same time, the press brake can also work relatively independently without using tandem mode.



### ► 特点 | Features

- 同步性强，双机100%同步
- 加工工件范围更广
- 稳定性强且效率高
- 全方位安全防护系统
  - ※随动前托料
  - ※前/后退料装置
  - ※自动抽管装置
  - ※无线脚踏开关
- Strong synchronization, 100% synchronization
- Wider range of workpiece processing
- Strong stability and high efficiency
- Comprehensive safety protection system
  - ※Bending follower
  - ※Front and back feeding devices
  - ※Automatic pumping device
  - ※Wireless safety foot pedal



## 大型智能折弯机 | GHL 2000-12000

GHL 2000-12000高精度大型折弯机由意大利Gasparini 家族的技术核心人员设计研发，在中国成功进行了技术成果。

G-Press originates from Italy Gasparini family, GHL 2000-12000 high-precision large-scale Press brake is designed by Italian main technical people, it was successfully transformed into technical achievements in 2019 after being assembled in China.



### ▲ GHL2000-12000 大型智能折弯机

GHL2000-12000 large and intelligent press brake

### ► 特点 | Features

- DELEM DA69T或ESA S660W数控系统控制;
- 上模全长12.1米，下模可自动调节，调节范围为40-260mm，最小增量单位20mm;
- 鼓型修正工作台及液压自动补偿系统;
- 自动存取三套模具的模具库;
- 工业4.0折弯数据交换及统计系统;
- CE标准液压系统;
- 激光安全防护装置 DSP-AP+MCS;
- 激光折弯对光仪。

- DELEM DA69T or ESA S660W CNC control,
- Full length of top tool is 12.1M, bottom tool can be adjusted automatically from 40-260mm, Minimum increment 20mm,
- Drum correction table and hydraulic compensation system,
- Automatic tool library can automatically access three sets of toolings;
- Industry 4.0 bending data exchange and statistics system
- CE standard hydraulic system
- Laser protecting device DSP-AP+MCS
- Bendind line

# 机械手折弯单元及工业4.0生产线

## Robotic Bending Cells & Industry 4.0



某知名集团使用  
Used by a well-known group

▲ GHL420-6000 机器人自动化折弯单元  
GHL420-6000 Robotic automatic bending unit

### ► 技术参数 | Technical Parameters

折弯力范围 Range of bending force	250-4200Kn
有效折弯长度范围 Range of bending length	3100-6100mm
喉口深度范围 Range of throat depth	46-mm
最大行程范围 Range of max. stroke	150-400mm
开启高度范围 Range of daylight	340-600mm
最大工件重量约 Approximate workpiece max. weight	200kg
机械手最大承载能力 Robotic max load-bearing capacity	300kg
板材堆放高度 Stacking height of sheet metal	1800mm
码垛高度 Stacking height	1800mm
空气压强 Air Pressure	6-8Bar

\*案例仅供参考，其他需求可客户化定制！

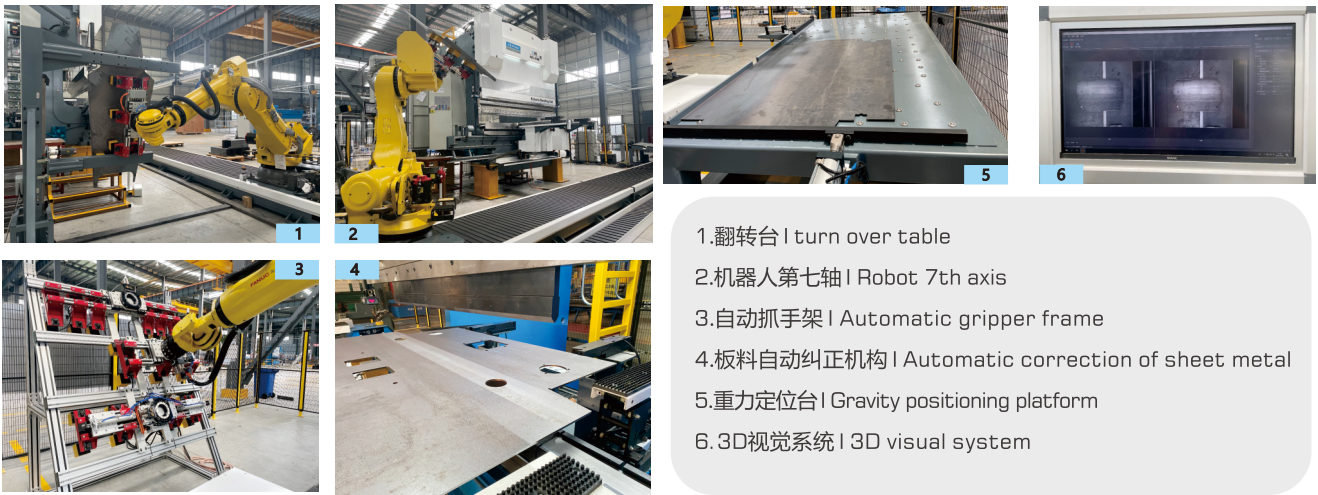
\*The case is for reference only, and other requests can be customized!



## ▶ 机械手标准配置 Robotic Bending Cells Standard Configuration

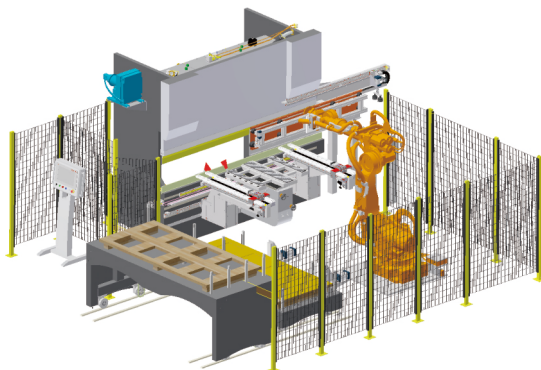


▶ 机械手折弯单元  
Robotic bending cell

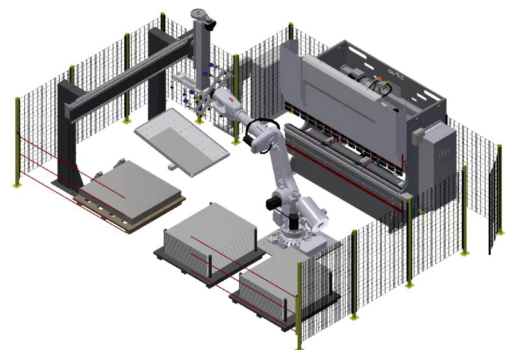


1. 翻转台 | turn over table
2. 机器人第七轴 | Robot 7th axis
3. 自动抓手架 | Automatic gripper frame
4. 板料自动纠正机构 | Automatic correction of sheet metal
5. 重力定位台 | Gravity positioning platform
6. 3D视觉系统 | 3D visual system

## ▶ 应用 | Application



▶ 电梯门板专用自动化折弯单元  
Special automatic bending cells for elevator door panel

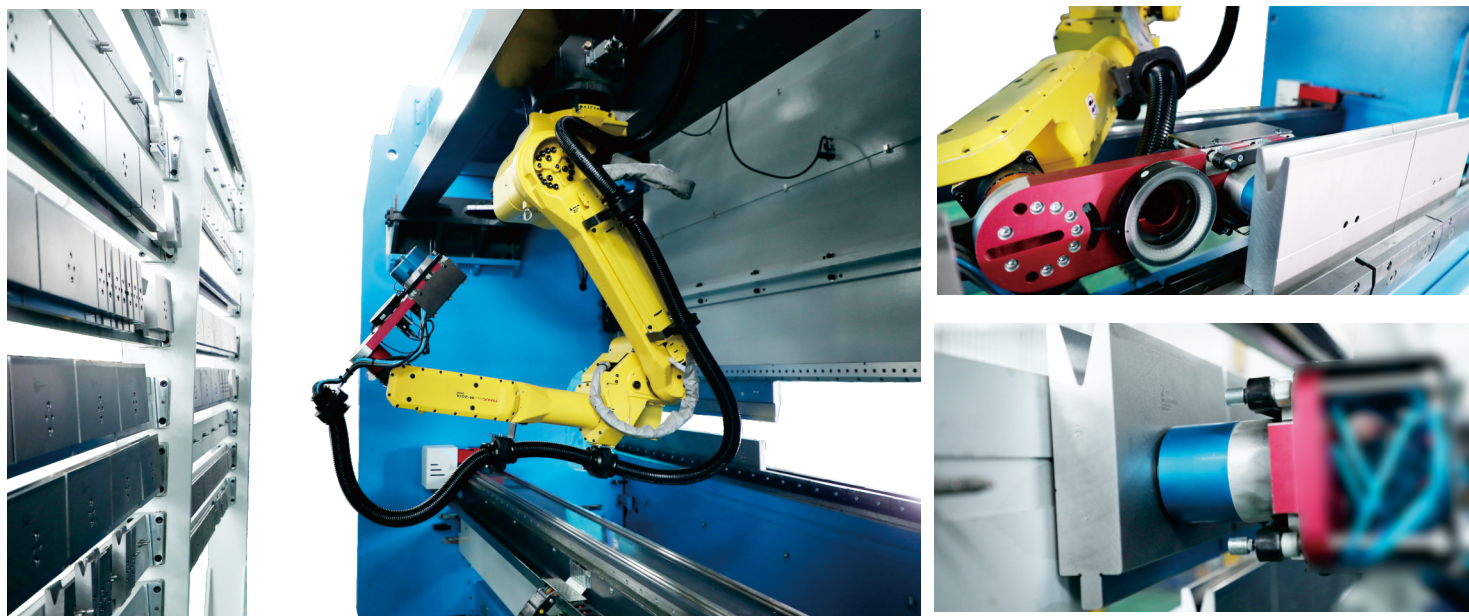


▶ 单机自动化折弯单元  
Press brake with robotic bending cells

## 机器人自动换模 | Robotic tooling changer

机器人自动换模系统是我们专业为客户开发设计的一种特殊工装，主要由模具库、机器人、管理程序三部分组成，可灵活高效地将上、下模具从模具库里调取移动至折弯机。可适用于折弯机手动折弯或自动化折弯两种工况，是小批量、多批次钣金加工过程中频繁更换模具的有效解决方案。

The robotic tooling changer system is a special fixture developed and designed by us professionally for customers. It mainly consists of three parts: tooling library, robot, and management program. It can flexibly and efficiently retrieve and move upper and lower toolings from the tooling library to the press brake. It can be applied to both manual bending and automatic bending of the press brake, and is an effective solution for frequent tooling replacement in low volume-high variety processing.



### ► 特点 | Features

- 根据不同的折弯工件直接调用程序，实现模具的自动更换。
  - 可快速且精准的识别、抓取并装卸模具。
  - 缩短了人工换模时间，大大提高了折弯效率与产能。
  - 换模过程不但快、准、稳,而且整个机构稳定性强且安全系数高。
  - 模具库存储空间大，至少可同时存储4套上下模，可客户化定制。
  - 模具库为紧凑型设计，完美的设计理念，不占用操作空间。
- Directly call the program based on different workpieces to achieve automatic mold replacement.
  - It can quickly and accurately identify, grasp, and load/unload toolings.
  - Shortened manual tooling time, greatly improved bending efficiency and production capacity.
  - The tooling changing process is not only fast, accurate, and stable, but also the entire mechanism has strong stability and high safety factor.
  - The tooling inventory has a large storage space, which can store at least 4 sets of upper and lower molds simultaneously, and can be customized.



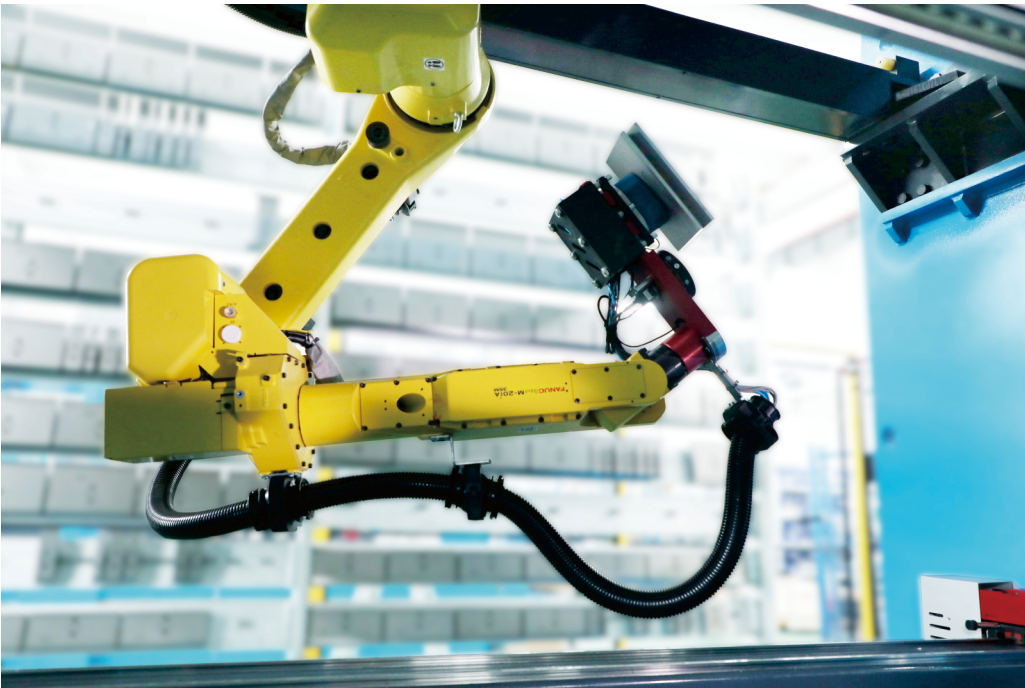
## ► 功能 | Function

机器人换模是我司专门开发设计的一种特殊工装，可实现自动安装/拆除模具的自动化单元，机器人抓手利用气动元件快速抓取和释放模具。模具上带专利的安全卡扣可以保证机器人抓手快速且稳固地抓取和释放。

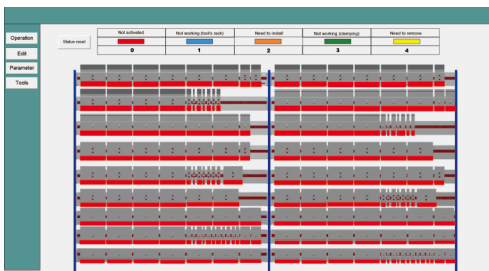
Robotic tool changer is a special fixture designed and developed by G-Press which is a special gripper that hands the tools from the storage to the press brake. Its movement is pneumatic and allows tools to be hooked quickly. The tools can be gripped by the pin frontally or reversed thanks to a patented safety device system.

抓手末端配有专用的视觉识别装置，能保证抓手精准地从模具库上抓取模具，在抓取之前能通过扫描折弯机模具位置来避免和折弯机发生碰撞。

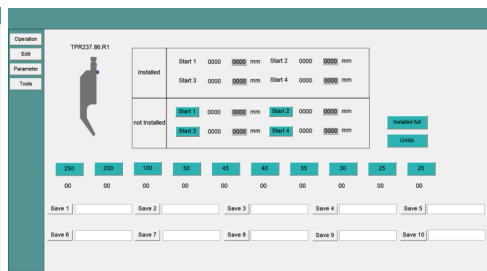
The gripper is equipped with a laser device that searches the hole tools, guaranteeing a more precision and correct coupling. The laser scans the press brake before starting the cycle, in order to avoid any collisions.



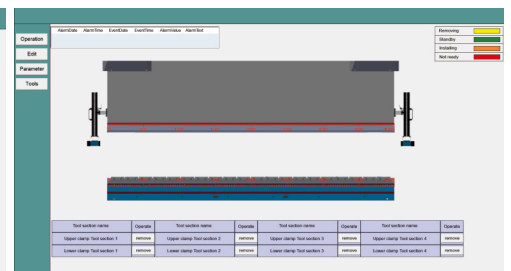
## ► 操作界面 | Operation interface



实时监视模具在模具库的放置状态  
Real time monitoring of the placement status of tooling in the mold library



编辑模具分段  
Edit tooling segments



实时显示折弯机上的模具安装状态  
Real time display of tooling installation status on the press brake

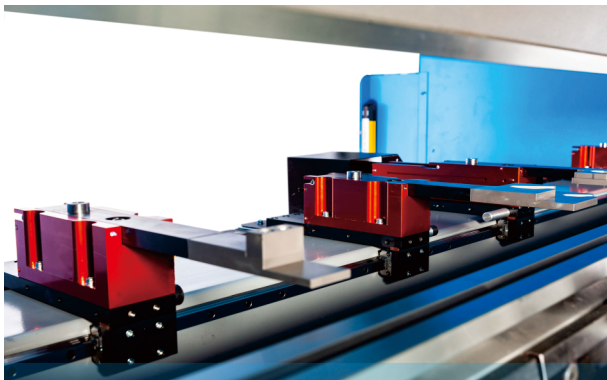
## 后挡料系统 | Back Gauge System

后挡料系统是保证折弯产品尺寸精度的重要机构，后挡料确保能在最灵活、最精密及高速下完成几乎所有复杂折弯工件的定位需求，每套挡指均采用G-Press的专利设计——防撞后挡指系统。

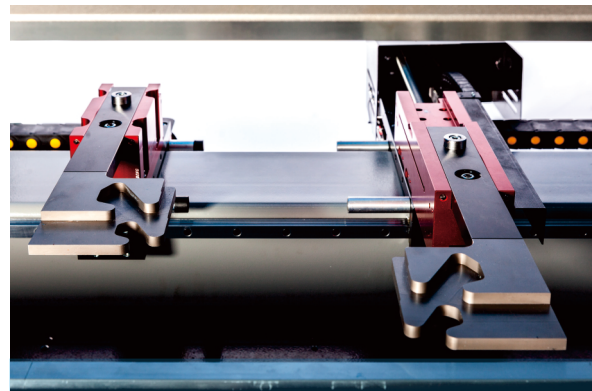
后挡指类型有标准后挡指、异型后挡指、气动伸缩后挡指等，以适用不同的加工工件需求。

The back gauge system is an important part of the press brake which guarantees the dimensional accuracy of the bending products ensures the most flexible, precise and high-speed positioning of almost all complex bending work pieces. Each back gauge finger uses G-Press's patented design - collision avoidance system.

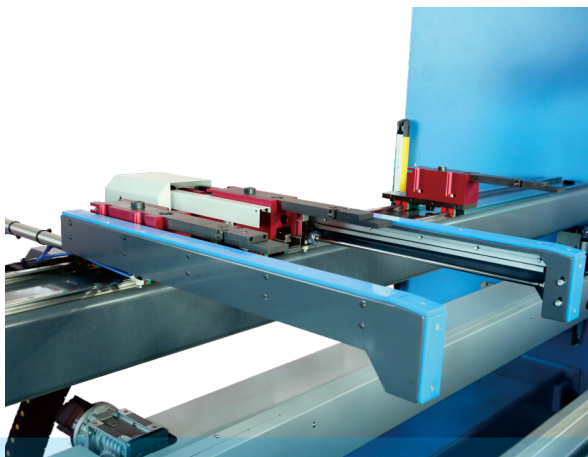
Back gauge finger types include standard finger, special-shaped type finger, pneumatic telescopic finger, etc. To be suitable for different working conditions.



GHP-2(X-R)  
标准后挡指(standard type)



GHP-2(X-R)  
选配/Optional: 异型后挡指(special-shaped)



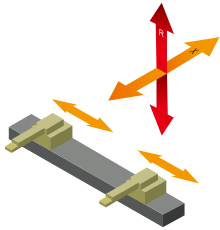
GHP-5(X-R-Z1-Z2+X5)  
选配/Optional:  
气动后托料(Pneumatic rear supporting)



GFP-6(X1-X2-R1-R2+Z1-Z2)  
落地式后托料(Floor type back back gauge system)

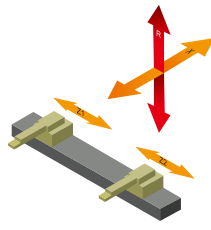


## 后挡料选型 I Back Gauge Optional



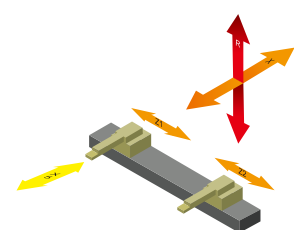
### □ GHP-2(X-R)

GHP-2后挡料  
GHP-2 Back gauge (X-R)  
-标配2个手动后挡指  
-Standard 2 manual fingers



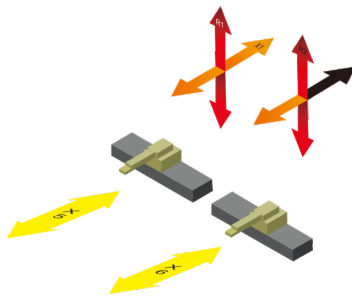
### □ GHP-4(X-R-Z1-Z2)

GHP-4后挡料  
GHP-4 Back gauge (X-R-Z1-Z2)  
-标配2个可CNC控制的后挡指  
-Standard 2 fingers which can be controlled by CNC



### □ GHP-5(X-R-Z1-Z2+X5)

GHP-5后挡料  
GHP-5 Back gauge  
-标配2个可CNC控制的后挡指及X5轴  
-Standard 2 fingers which can be controlled by CNC and X5 axis



### □ GFP-6(X1-X2-R1-R2-Z1-Z2)

GFP-6 落地式后挡料  
GFP-6 Floor type back gauge  
-标配4个后挡指  
-标配6轴联动，可独立编辑每个轴  
-可在不同位置灵活加工多种工件及异型工件  
-Standard 4 fingers  
-6-axis linkage, independent editing of each axis  
-Flexible processing of various workpieces and irregular workpieces in different positions.

## ► 后挡料主要参数及精度

### Back gauge main parameter & precision

类别 Item	X轴标准行程 X-axis standard strokes	X轴速度 X-axis speed	X轴精度 X-axis accuracy	X轴重复定位精度 X-axis repeatability	R轴标准行程 R-axis standard strokes	R轴速度 R-axis speed	R轴精度 R-axis accuracy	R轴重复定位精度 R-axis repeatability	Z轴速度 Z-axis speed	Z轴精度 Z-axis accuracy	Z轴重复定位精度 Z-axis repeatability
GHP后挡料 GHP backgauge	350	600	± 0.02	± 0.01	120	300	± 0.05	± 0.05	-	-	-
GHP标准后挡料 GHP standard backgauge	600 / 800	600	± 0.02	± 0.01	200	300	± 0.05	± 0.05	1000	± 0.05	± 0.05
GFP落地式后挡料 GFP floor type backgauge	800	800	± 0.02	± 0.01	200	400	± 0.05	± 0.05	1000	± 0.05	± 0.05

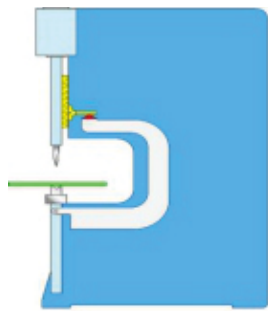
单位/unit:mm

## 结构补偿系统 REFLEX REFLEX Structural compensation

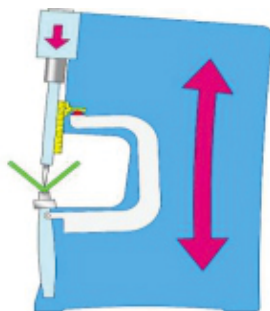
折弯机的“C”型架结构独立于机身墙板结构之外，在折弯过程中不会随着墙板的变形而发生形变，与光栅尺、CNC配合使用。安装REFLEX补偿系统之后，上横梁的实际位置通过安装在带自动调节的平衡装置和独立无变形影响的附加“C”型架上的2把光栅尺来检测。因此，在折弯过程中这套补偿系统会根据墙板“张口”的变形量自动消除光栅尺的测量误差。

With REFLEX System, the "yawing" effect of "C" frames is eliminated. The real position of the upper beam is measured by two linear encoders installed on the auto-balanced lever and "C" shaped sub-frames that are independent of the main frame deformation during bending.

Assisted by the REFLEX mechanism, the measurement tolerance of the encoder caused by the yawing of the side frames is compensated. This system helps achieve up to 1-micron accuracy in ram position measurement. It also ensures the highest positioning repeatability therefore angle consistency.

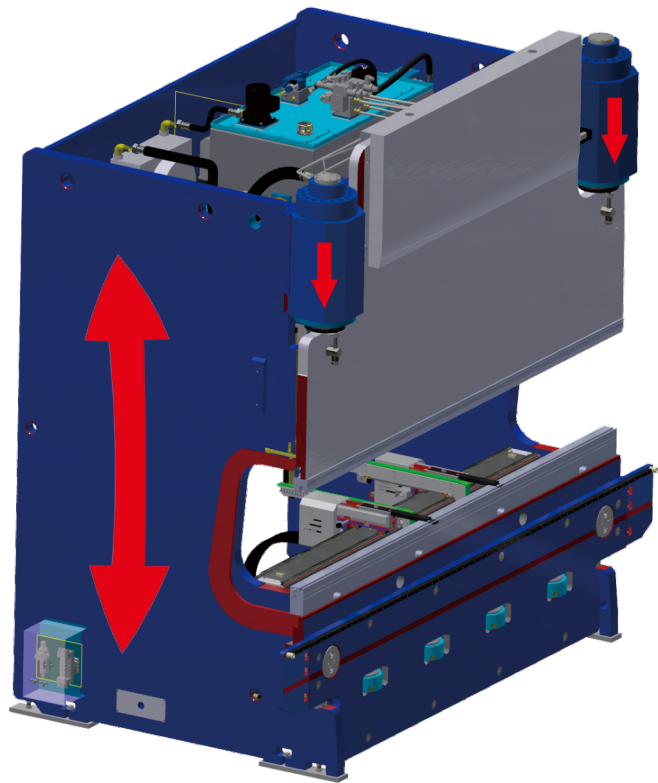


Before Bending  
折弯前



During bending  
折弯中

Yawing Effect  
“张口”现象

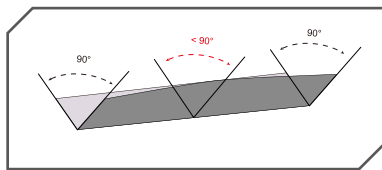
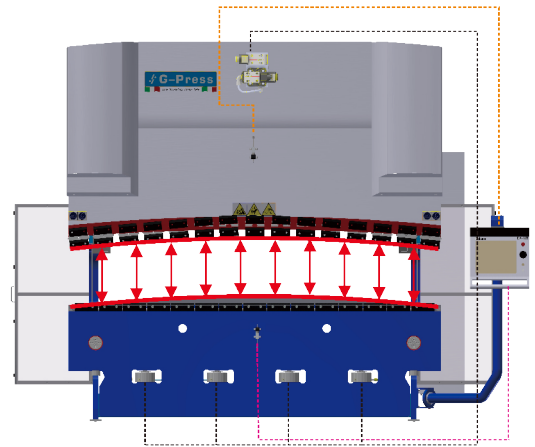


## 液压式自动扰度补偿系统 G-CS

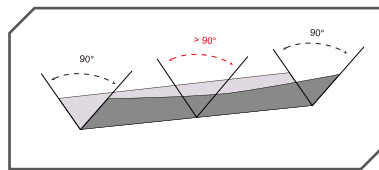
### Automatic Hydraulic Crowning System Model G-CS

液压式自动扰度补偿系统G-CS，是我司联合意大利技术团队设计和开发的一款最新版折弯机自动补偿系统，根据所输入的钣料厚度、长度、上下模具、机床钢性等数据，通过高精度压力应变仪来检测上滑块和下床身在折弯过程中的形变量并反馈给CNC。在整个折弯过程中实时控制压力比例阀的动作和独立的油泵实时响应，保证了形变量补偿值的实时、高效及准确性，从而完美实现“工件全长范围内折弯角度的一致性”。

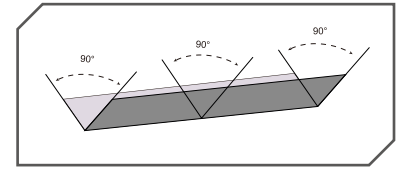
Automatic Hydraulic crowning system model G-CS is designed and developed by the Italian technical team. The "G-CS" system is equipped with high-precision pressure strain gauges, which are installed in the upper and lower beam of the machine to detect the deformation of the upper and lower beam during the bending process. EYENCE PLC receives and processes the data fed back and then controls the action of the pressure proportional valve and independent oil pump to ensure the compensation during the entire bending process, thus perfectly achieving "the consistency of the bending angle within the full length of the workpiece".



自动扰补 无



自动扰补 有

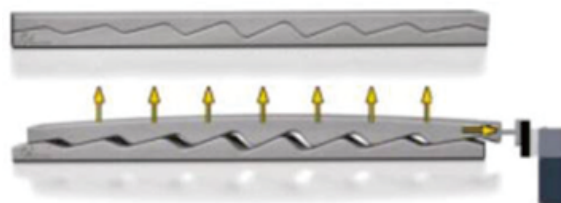
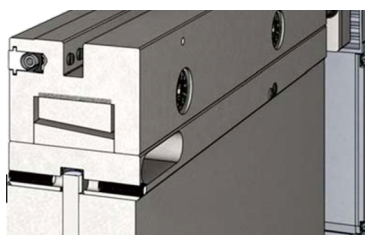


## 机械补偿系统 B-CM

### Mechanical Crowning System Model B-CM

机械补偿工作台采用独特的经过加工及热处理的模块结构，每组楔形块相对位移补偿量都根据上梁和下梁在工作中受力变形而设计的。数控系统根据工件折弯时的负载力计算出上下梁所需的补偿量，并自动控制楔块的相对运动，以有效地补偿上梁和下梁的扭曲和变形。机械补偿机构大大降低了机床的加工难度，更加先进可靠，无泄漏，精度控制更加精确。

The unidirectional mechanical deflection compensation mechanism adopts a unique specially processed wedge block mechanism. Each set of wedge blocks is designed according to the deflection upper and lower beam. The CNC calculates the required compensation amount according to the load force when the workpiece is bent, and automatically controls the relative movement of the wedge block to effectively compensates for the deflection. The mechanical compensation mechanism greatly reduces the processing difficulty of the machine and is more advanced and reliable, has no leakage, and the precision control is more precise.



## 数控系统

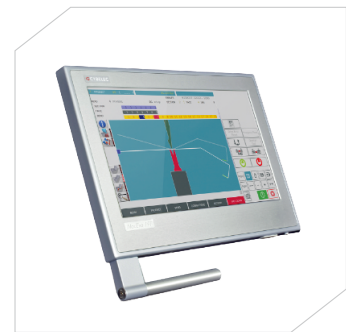
### Numerical Control System



▲ Delem



▲ ESA

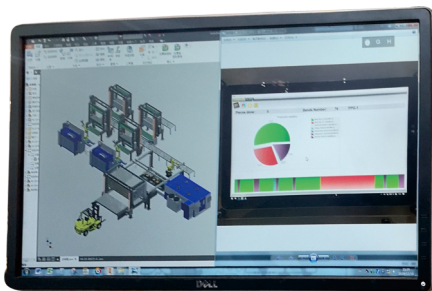


▲ Cybelec

#### ▶ 选配 Optional

- > 2D图纸导入编程
- > 3D模型导入编程
- > 随动前托料控制
- > X1-X2角度编程
- > 条形码/二维码识别
- > 角度检测补偿功能
- > 机床变形补偿
- > 板料厚度检测补偿功能
- > 数据采集, 支持工业4.0接入

- > 2D graphical touch screen programming mode
- > 3D visualisation in simulation and production
- > Part support control
- > X1-X2 angle programming
- > Barcode/QR code identification
- > Angle measurement compensation function
- > Frame deflection compensation
- > Sheet thickness detection compensation function
- > Data acquisition, supporting industry 4.0



#### ▲ 生产管理软件

Production management software

对生产情况进行实时监测和分析。  
 如对生产进度, 物料消耗, 质量控制, 模具使用, 报警指标等进行及时跟踪和反馈, 通过实时的数据监控、查询和分析, 有效帮助企业管理人员提供决策支持。  
 Real time monitoring and analysis of production.  
 It can track and feedback timely for produce progress, material consumption, quality control, press brake tooling use, alarm indicators and so on. enterprise managers can effectively get the decision support through real-time data monitoring, query and analysis.



#### ▲ 3D模型导入编程

3D model import programming

直接导入3D模型, 自动计算折弯步骤, 自动选取模具, 能够快速读取折弯件的信息并准确给出折弯编程数据 (折弯次序、刀具信息、后挡料位置等), 极大提高了车间的生产效率并节约人力成本。

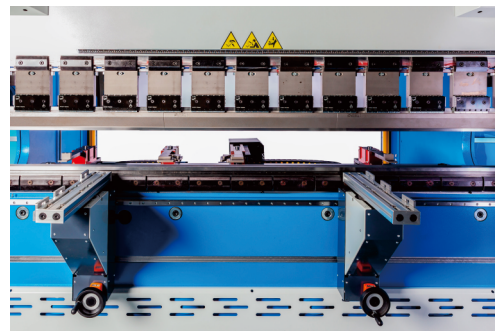
It can import the 3D model directly, calculate the bending steps automatically, and select the mold automatically. It can quickly read the information of workpiece and accurately give bending programming data (bending sequence, tool information, back gauge position, etc.), greatly improving the efficiency of workshop production and the cost of manpower are saved.



## 前托料 Front Support



- ▶ GHM和GHB设备使用EZ款手动滑动前托料  
Manual sliding front support  
EZ type for the series of GHM and GHB



- ▶ GHT和GHL设备使用SP款手动滑动前托料  
Manual sliding front support  
SP type for the series of GHT and GHL

## 随动前托料 Sheet follower



### ◀ 一体式随动前托料 Sheet follower

- 主要功能是在折弯过程中支撑板材并保持与上梁100%同步，适用于大尺寸的板材。
- Sheet follower have the main function to support the sheet plate during bending phase and are synchronized with top beam;useful to the operator for job lots of large workpiece.

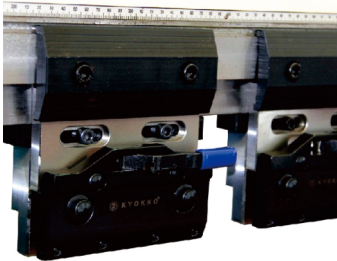


### ◀ 落地式随动前托料 Sheet follower

- 安全、高效、便捷，保证角度精度
- 独立的控制系统
- 实现一台随动多台共享模式
- Safety,efficient and convenient to ensure angle accuracy
- Independent control system
- Realize a multi-plaform sharing mode with moving

## 夹紧系统 Clamping System

### > 上夹具 Top tool clamping



- ▶ GS-T.M 手动上夹具  
GS-T.M manual top clamping

标准中间连接，通过卡扣实现快速释放前锁定，快速释放和前部工具更换，无需横向抽取模具。

Standard intermediate clamp with fast locking lever for faster tooling change. Those fast action clamps allow vertical loading/unloading of tools. No need to slide laterally the tools (punches)

Brand: KYOKKO/G-Press



- ▶ GS-T.H 液压上夹具  
GS-T.H hydraulic top clamping

通过独立的液压站控制可实现一键换模。可垂直装卸模具、模具自动落座和自动夹紧、数秒内折弯线自动对中，这些功能可以让折弯作业更加安全、快速和高效。

WILA upper hydraulic clamping allows you to change tooling horizontally or vertically. Tools will be self-seated and aligned automatically within seconds when pressing the button of a separated hydraulic power pack. All these features make your bending process safer, faster and more efficient.

Brand: Wila



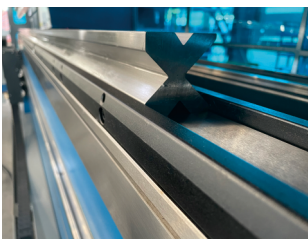
- ▶ GS-T.P 气动上夹具  
GS-T.P pneumatic top clamping

中间气动和自动对齐夹具，可快速拆除和安装模具。

Intermediate pneumatic and self aligning clamp. For quick release and tooling set up on machine.

Brand: Rolleri/G-Press

### > 下夹具 Bottom tool clamping



- ▶ GS-B.M 手动下夹具  
GS-B.M manual bottom clamping

标准手动夹具  
可适用于M60或M90下模

Standard manual clamping, Available in the models M60 or M90 based on the bottom dies used.

Brand: KYOKKO/G-Press

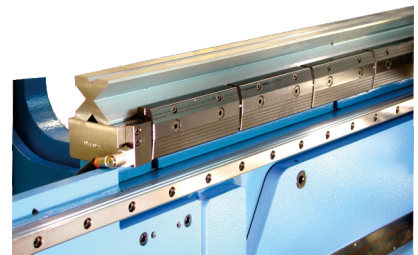


- ▶ GS-B.H 液压下夹具  
GS-B.H hydraulic bottom clamping

带Ty调节功能的液压下夹具，每隔200mm有一个调节刻度盘，可以对局部折弯角度进行微调。

With Ty-adjustment function allows you to adjust in Y direction every 200 mm which makes it possible to fully compensate for unavoidable -cumulative -processing tolerances in the press brake.

Brand: Wila/G-Press



- ▶ GS-B.P 气动下夹具  
GS-B.P Pneumatic bottom clamping

中间气动和自动对齐夹具，可快速拆除和安装模具。

Intermediate pneumatic and self aligning clamp. For quick release and tooling set up on machine.

Brand: Rolleri/G-Press



## 激光安全防护装置 Safety Device



折弯机专用激光安全防护装置保护区域固定在刀尖下方并随着上滑块同步运动，确保了折弯机高速下行时任何物体在接触刀尖前必先进入保护区域。一旦有遮挡物（如工人手指）进入保护区域，激光安全防护装置会立即发出信号并中断滑块的下行动作，从而保护操作工的人身安全。

Safety device protects the press brake operator from the danger of crushing that can take place accidentally between the moving part of the machine and the fixed one. When an obstacle (for example the operator fingers) entering the protection zone, is detected immediately causing consequently the interruption of the upbeam motion.

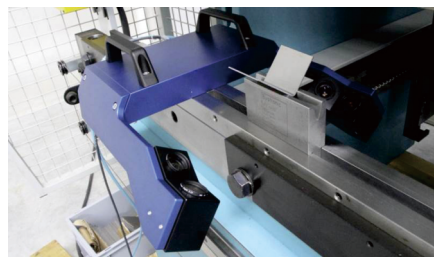
## 折弯角度检测补偿系统

## Bending Angle Measurement System

### 保证每一刀折弯角度均达到完美效果!

- 与数控系统实时通讯
  - 高精度测量折弯角度和板材回弹系数
  - 非接触式工作
  - 不受材料厚度的影响
  - 不受模具形状的影响
  - 不需要对模具做任何调整
  - 可设定不同的测量位置
  - 可移动式传感器用于补偿校正
  - 并联使用2个或4个传感器
  - 通过使用应变测量仪来计算板材的回弹特性
- 
- Real-time communication with CNC system
  - High accuracy measurement of bending angle and plate spring-back coefficient
  - Works contactless
  - Not affected by material thickness
  - Not affected by mold shape
  - No modifications of tools necessary
  - Can set different measuring positions
  - Movable sensor for compensation and correction
  - Parallel use of 2 or 4 sensors
  - The plate Spring-back characteristics are calculated by using a strain gauge

### G-AMC



- ◀ 便携式激光角度测量仪
- G-AMC Portable



- ◀ 可移动式激光角度测量仪
- G-AMC\_U 90-220mm
- G-AMC\_E 90-220mm
- G-AMC\_EU 190-220mm



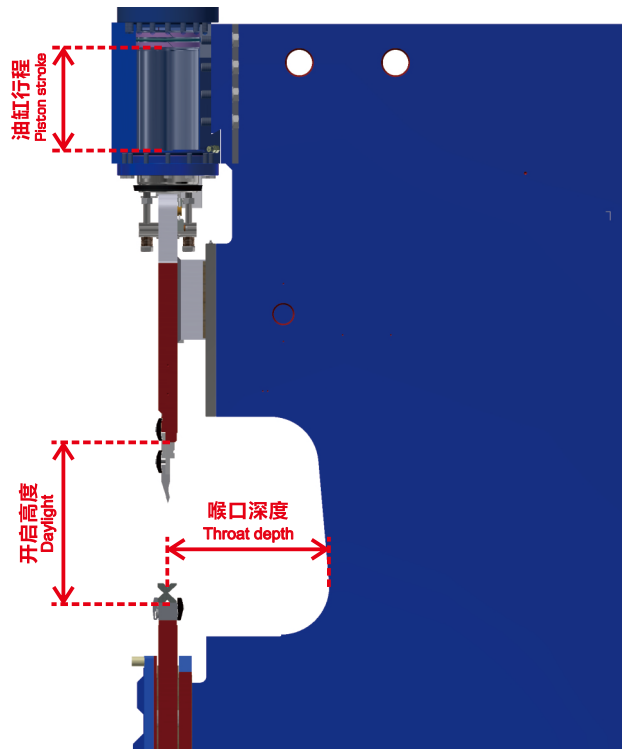
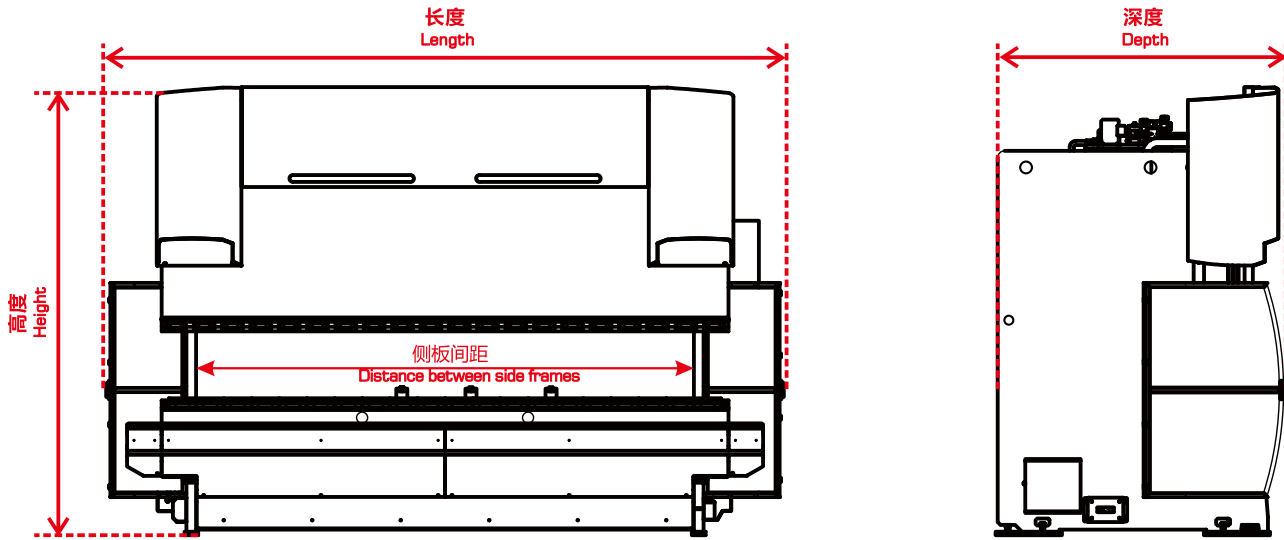
系列 Series	机型 Type	标称长度 Nominal length	折弯力 Bending force	工作区域 WORKING AREA					技术数据 TECHNICAL SPECIFICATION							规格和重量 DIMENSION AND WEIGHT			
				有效折弯长度 Usable bending length	侧板间距 Distance between side frames	喉口深度 Throat depth	油缸最大行程 Maximum piston stroke	开启高度 Daylight	趋近速度 Approaching work speed	可调工作速度 Adjustable speed	主伺服回程速度 Return speed-servo type	主伺服电机功率 Motor power-servo type	*标准回程速度 Return speed	*标准电机功率 Motor power	长度 Length	高度 Height	深度 Depth	大概重量 Approximate weight	
GHB	25	1250	250	1250	1200	46	150	340	220	0-12	200	5.5	170	4	1980	2185	1170	2.5	
	60	2000	600	2100	1600	265	200	400	200	0-12	165	6.7	137	5.5	2850	2660	1600	5	
	60	2500	600	2600	2100	265	200	400	200	0-12	165	6.7	137	5.5	3350	2660	1600	5.6	
	110	3000	1100	3100	2600	320	200	450	200	0-12	160	7.9	132	7.5	3930	2880	1630	8.5	
	110	4000	1100	4100	3600	320	200	450	200	0-12	160	7.9	132	7.5	4930	2880	1630	10.5	
	170	3000	1700	3100	2600	320	250	470	180	0-12	163	15	135	15	3930	2980	1720	11.5	
	170	4000	1700	4100	3600	320	250	470	180	0-12	163	15	135	15	4970	3100	1720	14	
	220	3000	2200	3100	2600	460	250	500	175	0-12	165	19	137	22	3970	3450	1840	12	
	220	4000	2200	4100	3600	460	250	500	175	0-12	165	19	137	22	4970	3250	1840	14	
	220	6000	2200	6100	5600	460	250	500	135	0-12	165	19	137	22	6900	3190	2080	25	
GHT	60	2000	600	2100	1600	300	250	450	200	0-15	165	6.7	137	5.5	2950	2810	1600	5	
	60	2500	600	2600	2100	300	250	450	200	0-15	165	6.7	137	5.5	3350	2810	1600	5.6	
	125	3000	1250	3100	2600	500	300	500	200	0-12	200	18	160	15	4080	3110	1800	11.5	
	125	4000	1250	4100	3600	500	300	500	200	0-12	200	18	160	15	5080	3110	1800	13	
	185	3000	1850	3100	2600	500	300	500	175	0-12	165	22	137	22	3970	3260	2090	12	
	185	4000	1850	4100	3600	500	300	500	175	0-12	165	22	137	22	4970	3260	2090	15.5	
	185	5000	1850	5100	4600	500	300	500	150	0-12	165	22	137	22	5970	3500	2090	20	
	185	6000	1850	6100	5600	500	300	500	150	0-12	165	22	137	22	6970	3570	2090	23	
GHX <sub>eco</sub>	35	1600	350	1700	1810	—	200	450	240	0-15	240	18*2	/	/	2960	2495	2040	4.3	
	35	2000	350	2100	2210	—	200	450	240	0-15	240	18*2	/	/	3360	2495	2040	4.9	
	60	1600	600	1700	1810	—	200	450	240	0-15	240	28*2	/	/	2960	2495	2040	4.5	
	60	2000	600	2100	2210	—	200	450	240	0-15	240	28*2	/	/	3360	2495	2040	5.3	
GHX	60	2000	600	2100	2600	—	200	400	200	0-12	165	6.7	137	5.5	3230	2880	2290	8.2	
	120	3000	1200	3100	3600	—	250	470	200	0-12	160	7.9	132	7.5	4260	3030	2390	12	
	120	4000	1200	4100	4600	—	250	470	200	0-12	160	7.9	132	7.5	5260	3030	2390	14	
	180	3000	1800	3100	3600	—	250	470	180	0-12	165	15	135	15	4255	3030	2390	14	
	180	4000	1800	4100	4600	—	250	470	180	0-12	165	15	135	15	5255	3030	2390	17	
GHL	250	3000	2500	3100	2600	500	300	500	175	0-10	150	22	113	30	3970	3030	2390	16	
	250	4000	2500	4100	3600	500	300	500	175	0-10	150	22	113	30	4970	3400	2150	18	
	250	5000	2500	5100	4600	500	300	500	155	0-8	130	22	113	30	6390	3630	2270	24	
	250	6000	2500	6100	5600	500	300	500	130	0-8	130	22	113	30	7390	3630	2430	30	
	320	3000	3200	3100	2600	500	300	500	160	0-10	140	25	110	30	3970	3450	2270	17	
	320	4000	3200	4100	3600	500	300	500	160	0-10	140	25	110	30	4970	3450	2270	19	
	320	6000	3200	6100	5600	500	300	500	140	0-8	120	25	113	30	6400	3850	2450	33	
	420	4000	4200	4100	3600	500	400	600	115	0-8	150	32	124	37	5030	3850	2300	32	
	420	6000	4200	6100	5600	500	400	600	115	0-8	150	32	124	37	7565	4420	2320	48	
	500	6000	5000	6100	5600	500	400	600	85	0-8	90	39	75	45	6800	5130	2660	50	
640	6000	6400	6100	5600	500	400	600	75	0-8	90	45	75	45	6800	5200	2700	60		

\*以上为800T以下设备基本技术参数，其他规格根据客户需求另行提供

\*The above is the basic technical parameters of the equipment below 800T, other specifications are provided separately according to customized.

# 外形尺寸参考图

## External Dimensions Reference drawing









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