Factory Smart

For reference only

GENERAL-PURPOSE
CNC PRESS BRAKE

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GENERAL-PURPOSE CNC PRESS BRAKE

- Modern minimalist industrial design, attractive and elegant appearance
- Optimized parameter matching and high-quality core components, ensuring stable performance and ease of operation
- High-rigidity frame with automatic mechanical deflection compensation for precision bending
- Advanced assembly processes and rigorous standards, ensuring stable, full-process quality control
- Professional and complete after-sales service system:
  - Regional management of sales and after-sales personnel
  - Fast response mechanism for timely customer support
  - Customized products and services available upon request
  - Full-set automated sheet metal solutions offered

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MAIN MACHINE PARAMETERS AND CONFIGURATION LIST

MODEL: PPB 63X1500 (N+V) TECHNICAL SPECIFICATIONS

Name	Unit	PPB 63T / PPB 63x1500
CNC		Delem system Y1, Y2, X, R, Z1 Z2 axes
Crowning system		Mechanical Crowning
Max bending force	T	63
Max bending length	mm	1500
Y-axis motor power	KW	8.7/8.5
X/R-axis motor power	KW	1/1
Z-axis motor power	KW	0.4
Total Installed Power	KVA	11-14
Distance between columns	mm	1200
Throat depth	mm	350
Daylight	mm	580
Machine Weight	kg	4500
Oil tank capacity	L	130

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MAIN MACHINE PARAMETERS AND CONFIGURATION LIST (CONT)

Item		Unit	Value
Travel	Hydraulic cylinder stroke	mm	215
	X-axis	mm	500
	R-axis	mm	200
	Z-axis	mm	600
Y axis downward speed		mm/s	185
Y-axis forward speed		mm/s	19
Y-axis return speed		mm/s	180
X-axis forward speed		mm/s	400
R-axis forward speed		mm/s	200
Z-axis forward speed		mm/s	1200

Note: *N is the number of axes, including Y1, Y2, X, R, etc.; V is the compensation axis (mechanical crowning)*

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PPB 600T CONFIGURATION LIST

Name		Unit	PPB 63x1500
Positioning Accuracy	Y-axis repeat	mm	±0.01
	X-axis	mm	±0.1
	R-axis	mm	±0.1
	Z-axis speed	mm	±0.1
	V-axis	mm	±0.02
Dimension	Length	mm	2000
	Width	mm	1620
	Height	mm	2470

Note: *N is the number of axes, including Y1, Y2, X, R, etc.; V is the compensation axis (mechanical crowning)*

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PPB 63T CONFIGURATION LIST

No	Name	Type		Brand
1	CNC	6+1 axis DA66S		DELEM
2	Back gauge servo motor	EM3G-09/MS1H4		ESTUN
3	Hydraulic system main valve	Electro-hydraulic servo hydraulic valve group		Bosch Rexroth HAWE
		Synchronous control assembly	a. Back pressure-valve	
			b. Poppet valve	
			c. Proportional servo valve	
		Hydraulic control assembly	a. Cartridge valve	
			b. Pressure sensor	
			c. Directional valve	
			d. Proportional pressure reducing valve	
4	Linear guides	35		SHAC
		25		SHAC

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PPB 600T CONFIGURATION LIST (CONT)

No	Name	Type	Brand
5	Ball screws	880/1000	SHAC
6	Oil pumps	PGX/HQ12-16	Bosch Rexroth/ HAWE
7	Full set of cylinder seals	Fully sealed	PARKER or SKF
8	High-pressure hydraulic pipes	1. GE16 ZSR 3/4EDCF	PARKER/ BRENNAN
		2 GE28 LR3/4EDOMDCF	
		3 W10 ZLCF	
		4 WH10 ZSR KDSCF	
		5 WH10 ZLR KDSCF etc	
9	Coupling	GGRMP	SIT
10	AC contactor/ button	LC1D XB2B OSM	Schneider

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PPB 600T CONFIGURATION LIST (CONT)

11	Foot switch	FLS-XP-M62	Ruike
12	Main servo motor	EMB/MEG20-85(8.7KW/8.5KW)	ESTUN/Inovance
13	Magnetic scale	MPS/GVS215LC	OPKON/ELGO
14	Mechanical Compensation	PT-100x95mm	Dazhong/ Shuheng
15	Laser Protection	FPBS	ESTUN

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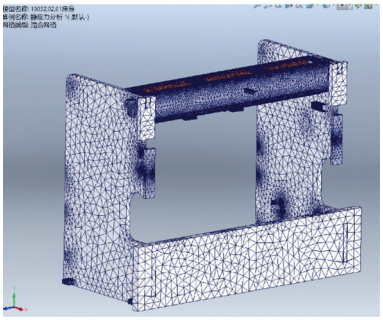
MACHINE PERFORMANCE AND STRUCTURAL FEATURES

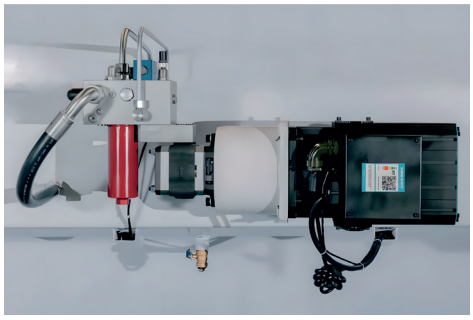
3.1 MACHINE DESIGN AND COMPONENTS

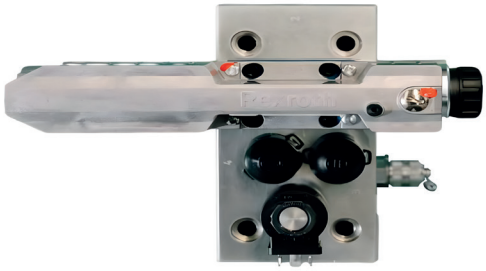
- The machine frame design is optimized by utilising finite element process to ensure high strength and rigidity.
- Compared with the traditional CNC press brake machine, the main motor adopts servo motor, adds pressure sensor, increases motor speed, increases filling flow rate and oil pump displacement, Y-axis motion is smoother and efficient, bending efficiency is 30% higher than the mainstream models in the market.

- The main drive adopts servo motor, and the speed of each state of Y-axis is different, which greatly reduces the hydraulic overflow, thus reducing power consumption and oil temperature, saving 30-40% electricity. Because the oil temperature is low, the service life of hydraulic oil is greatly increased.

- The German Rexroth fully closed-loop electro-hydraulic servo synchronous control system, and the fast response of the high-frequency valve group ensures that the machine has high stability and high precision during high-speed operation.







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MACHINE PERFORMANCE AND STRUCTURAL FEATURES (CONT)

3.2 FRAME BODY

- Fully welded steel structure with excellent vibration resistance.
- The frame is stress relieved via a vibration process which ensures greater frame stability and resistance to deformation.
- Frame is machined on a 5-axis machining center, this guarantees parallelism and perpendicularity of mounting surfaces.

3.3. HYDRAULIC SYSTEM

- Hydraulic connectors are from PARKER/SKF or BRENNAN(USA), which ensures a long service life;
- Including the most advanced full closed-loop electro-hydraulic servo synchronous control system;
- The machine can work on a continuous basis related to the specified parameters, and the hydraulic system ensures a leak-free and stable processing experience with high precision.

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MACHINE PERFORMANCE AND STRUCTURAL FEATURES (CONT)

3.4 BACK GAUGE SYSTEM

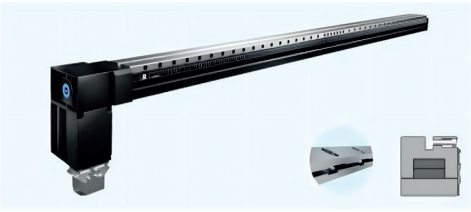
- The Z axis has a high positioning accuracy with fine tuning functionality for ease operation and high accuracy;
- The X and R axes are equipped with ball screws linear guide rails drive system, which are equipped with digital AC servo motors, with retract control function.
- The Z-axis provides low noise operation and high speed performance.

3.5 ELECTRICAL SYSTEM

- Electrical components are from international or joint-venture brands, in line with international standards, and the electrical control cabinet is equipped with refrigeration unit.
- Analog cables are equipped with shielded cable to avoid electrical interference.
- The enclosure of the electronic control cabinet meets the national standard IP54 protection standard.
- The double foot pedal switch enables up and down movements for convenient and simple operations.

3.6 MECHANICAL CROWNING

- The design center slot and flat plate of the mechanical compensation worktable are universal;
- The structure with dense point wedge compensation meets the angular accuracy requirements of the full bending length of the workpiece.
- Integrated speed reduction motor and scale.
- The closed-loop control of compensation has high control accuracy, and the compensation value is automatically calculated and set by the CNC to ensure a consistent bending angle over the total length.



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MACHINE PERFORMANCE AND STRUCTURAL FEATURES (CONT)

3.7 CONTROL SYSTEM DELEM DA66S SYSTEM OF THE NETHERLANDS

- Adoption of a real-time Linux embedded OS allows for instant shutdown.
- Multiple language options, including Chinese interface, ensure user-friendly operation.
- Fashionable exterior design and easy operation reflect a user-oriented approach.
- Intelligent modular structure supports flexible expansion up to 24 axes.
- High-brightness 24-inch TFT color LCD display with 4G memory capacity.
- Built-in programmable PLC ensures stability and reliability, reducing hardware wiring through logical programming.
- Standard USB port, flash drive, network interface, and RS232 communication interface.
- Automatic accumulation of machine working hours and bending cycles.
- Product annotation/editing, marking functions, and calculator capabilities.
- Fully touch-enabled digital and 2D/3D graphical programming, with automatic bending process planning and simulation.
- Machine outline, tools, and workpieces can be scaled freely in a 1:1:1 graphical representation.
- Digital and graphical tool programming for flattening tools, large-radius tools, multi-V tools, and adjustable V-tools.
- Automatic angle correction database, self-learning bending tolerance table, and comprehensive collision detection.
- Error warning system to prevent incorrect operations.
- Built-in production management software for productivity statistics.
- Remote and on-site diagnostic functions, enabling monitoring of I/O digital signals, analog signals, and axis status.
- Dedicated machine analysis software for real-time monitoring.

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SUPPLIED DOCUMENTATION AND ACCESSORIES

Item	Quantity	Remark
CNC system instruction manual	1	
Machine operate manual	1	
Electrical schematic diagram	1	
User precision adjustment manual	1	Electronic version

CUSTOMER RESPONSIBILITY

1. Hydraulic Oil:
high quality 46# anti-wear hydraulic oil.

2. Power Supply:
380V,50HZ, voltage fluctuation is ±5%

3. Ambient Temperature:
0°C- +40°C

4. Environmental Humidity:
20-80%RH

5. Environment
with less dust and no harmful or corrosive gases