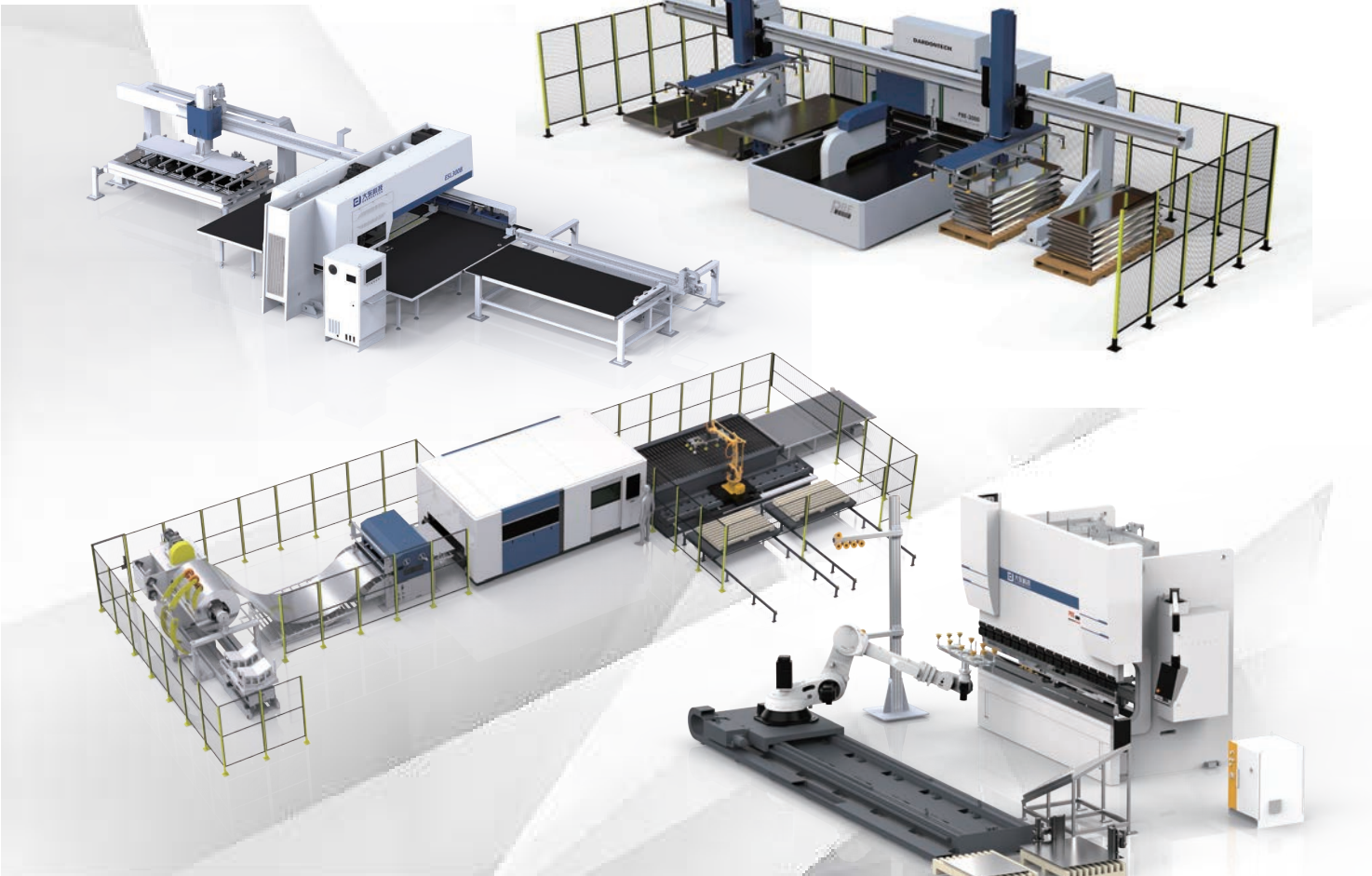


DARDONTECH

Enable Global Manufacturing



- Laser Cutting Machine
- CNC Press Brake
- CNC Turret Punch Press
- Panel Bender
- Punch and Laser Combined Machine

C COMPANY PROFILE



Scan to view and step into DARDONTECH

Qingdao Dadong Automation Technology Co., Ltd. was founded in March 2013. In August 2018, invested 36.5 million US dollars in the construction of the Intelligent CNC Equipment Technology Park in Qingdao Marine High-tech Zone, which was put into use in August 2019. The Second Phase (also known as the large tonnage press brake project) has an investment of 30 million US dollars, and the Third Phase (also known as the Sheet Metal Intelligent Manufacturing Automation Production Line Project) has an investment of 53 million US dollars. The total area is 128,000 m². Together, these phases have formed the "China Sheet Metal Equipment Intelligent Transformation Base".

The company is specialized in CNC machine tools for sheet metal industry, such as Punch & Laser Combined Machine, Fiber Laser Cutting Machine, CNC press brake, CNC Turret Punch Press, and Panel Bender, as well as CNC flexible production lines. They are widely used in metal processing industries including power complete sets of equipment, cabinets, curtain wall decoration, household appliances, elevators, fire doors, kitchen equipment, heavy machinery, and ship building industries, etc.

The company has an independent R&D department, which promotes the development of the industry through technological innovation. The thunder-speed pre-sale and after-sale service mechanism is another factor of sound reputation. The products are sold well globally, such as Europe, North America, South America, Southeast Asia, South Asia, Central Asia, Africa, the Middle East, and Russia.

During this period, the company has established industry-university-research cooperation agreements with institutions such as Nanjing University of Science and Technology and Qingdao Military-Civilian Integration College.



PRODUCTIONS

CNC TURRET PUNCH PRESS WORKSHOP



CNC PRESS BRAKE WORKSHOP



PRODUCTIONS

LASER CUTTING MACHINE WORKSHOP



PANEL BENDER WORKSHOP



MACHINING STRENGTH

5-Axis Machining Center



MODEL: VORTEX I-630V/6S
Process Range: 1425x1050x1050

5m Gantry Machining Center



MODEL: ML-532Z4
Process Range: 5060x3200x1400

6m Gantry Machining Center



MODEL: ML-640Z4
Process Range: 6000x3500x1800

Vertical CNC Turning Machine



MODEL: VL2500
Process Range: 2500x2000

Sandblasting



Purpose: Sandblasting
Process Range: 2500x6000x2500

Painting



MODEL: VL2500
Process Range: 2500x2000

MACHINING STRENGTH



**Bed Tempering:
Stress Relief**



**KEYENCE Coordinate
Measuring Machine (CMM):
Inspecting Geometric
Tolerance Accuracy**



**RENISHAW
Laser Interferometer:
Precision Inspection and
Automatic Compensation**



**RENISHAW Ballbar:
Inspecting the circular
motion trajectory of
machine tools**



PDS SERIES

CNC PRESS BRAKE



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Retain proportional valve control technology, mature and reliable. The variable pump technology controlled by servo can significantly reduce machine noise, decrease oil temperature heating, and save energy by more than 50%





PDS SERIES SINGLE SERVO

Faster speed, higher efficiency, energy saving 50%+



PDE SERIES DOUBLE SERVO HYBRID

Pump control technology, energy saving 75%+



PFE SERIES FULL ELECTRIC SERVO

Servo motor directly-drive technology, high accuracy & high efficiency



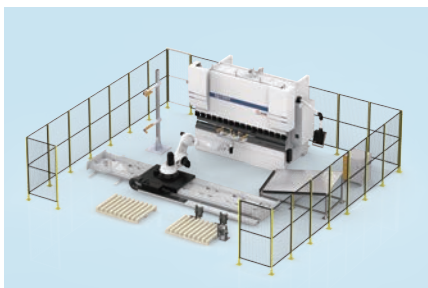
PDH SERIES LARGE FORMAT & TONNAGE

Heavy duty bending solution, support customization



TANDEM SERIES

Synergetic or separately, efficient and flexible



ROBOT BENDING CELL

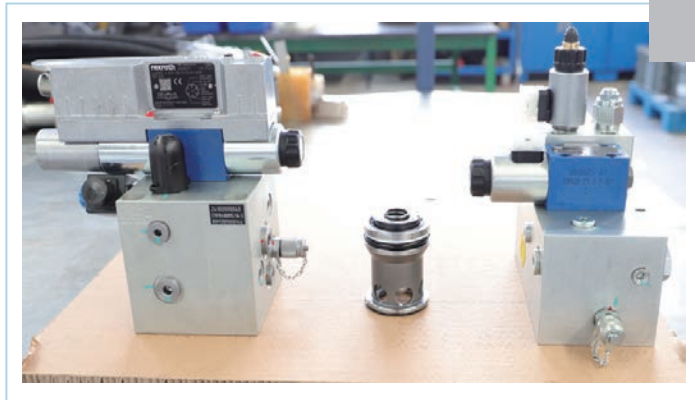
Labor-saving, integrable with automated lines, 24-hour non-stop production



Standard Configuration

Hydraulic System

Adopting a complete set of imported hydraulic components from Germany, the frequency response is higher, the failure rate is lower, and the machine tool runs faster and more smoothly



Crowning Technique

Equipped with high-precision oblique wedge compensation device as standard, controlled by CNC numerical control system to obtain precise compensation, ensuring high-quality bending straightness and angle



Quick Clamp

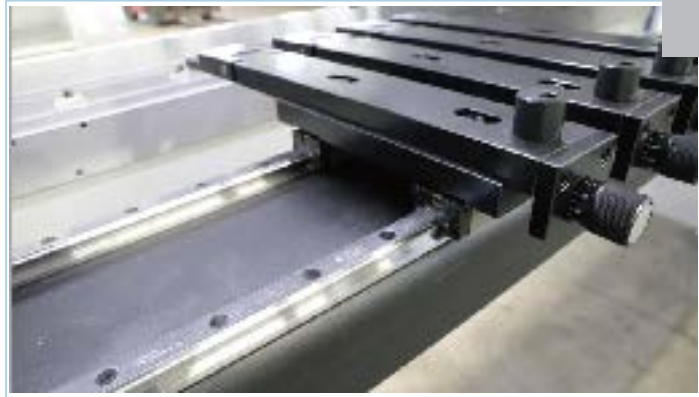
Equipped with a multi-functional clamp as standard, the small section of tool can be quickly loaded and unloaded (front loading and unloading), reducing labor intensity for workers and improving production efficiency



Standard Configuration

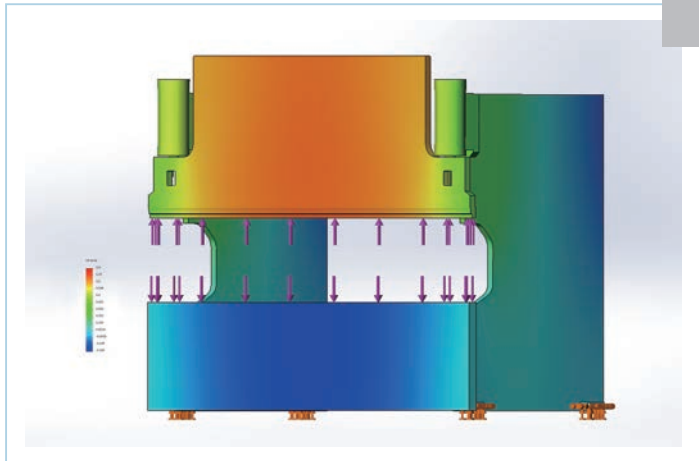
■ Back Gauge System

Double linear guide rail design ensures optimal positioning accuracy, and multi-level gauge design increases positioning range



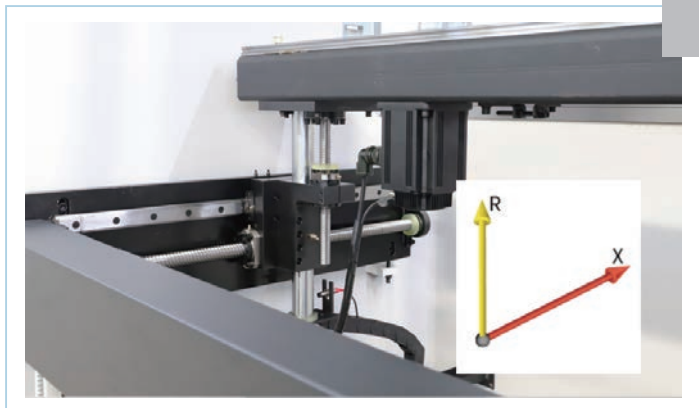
■ Machine Tool Design

Through finite element analysis, the deformation trend of the machine tool under working conditions is analyzed to guide the design of a reasonable guide rail surface tilt structure, ensure the consistency of the alignment of punch and die, and improve the accuracy of the workpiece

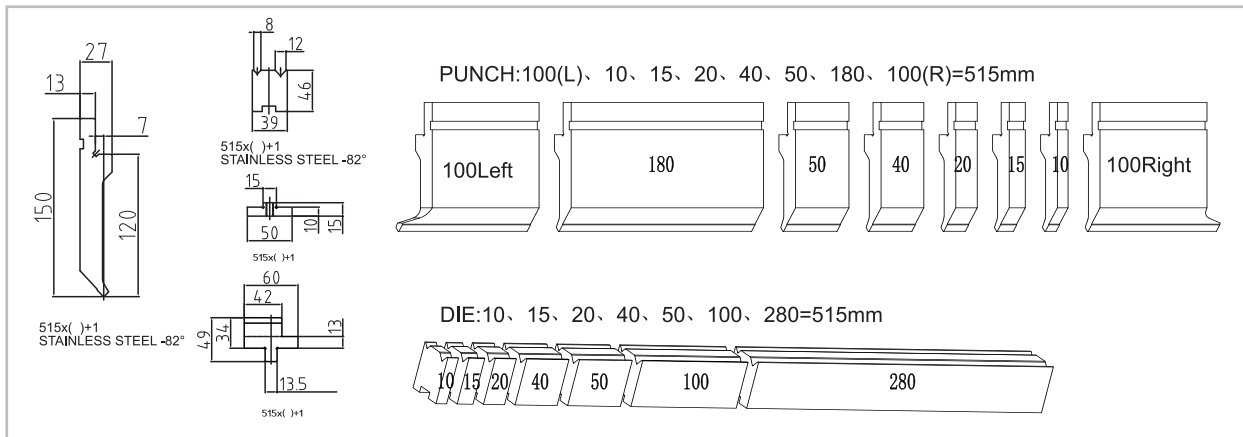


■ Number of CNC Axes

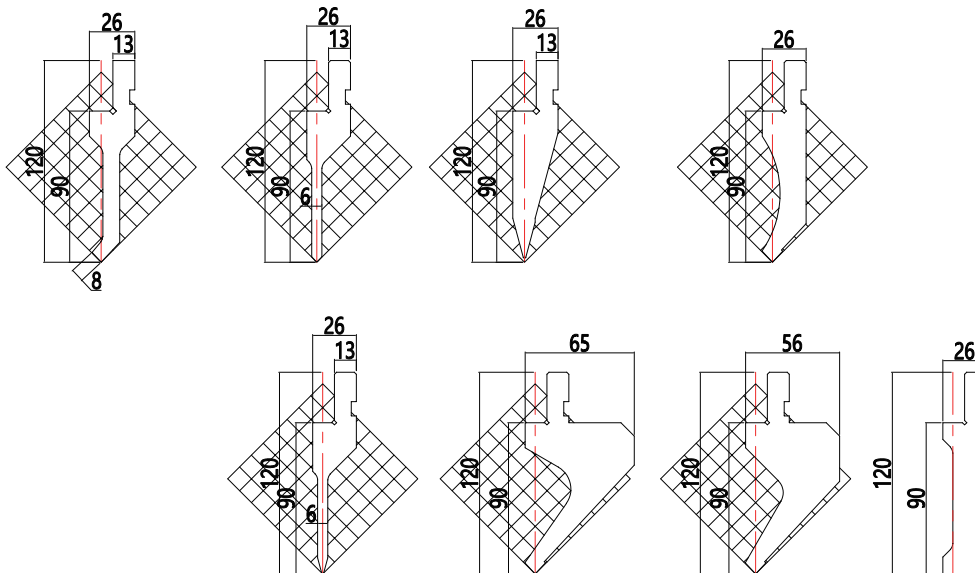
To meet the growing demand for bending functions from users, the entire series comes standard with 4+1 axes (Y1/Y2/X/R+V), with optional 6+1, 8+1 axes, and customized automation connections



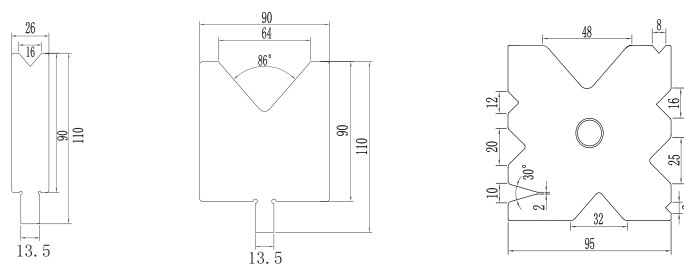
Standard Tooling



Punch Option



Die Option



PDE SERIES

CNC PRESS BRAKE

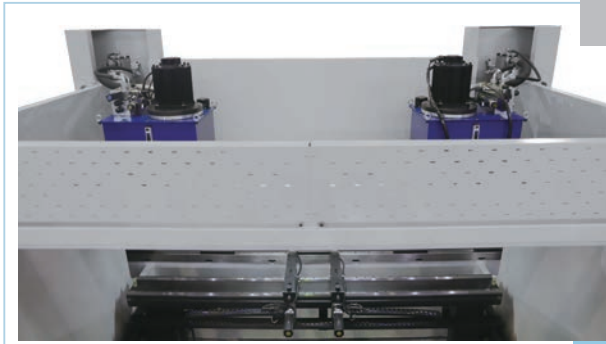


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Features

- Pump control technology replaces conventional valve control technology, eliminates overflow losses, and saves 75% energy
- Servo motors can significantly overload in a short period of time, and the rated power of the selected motor is only 50% of the maximum working power
- Reduce the fuel tank capacity by 70%, decrease the usage of hydraulic oil, and prolong the service life of hydraulic oil
- Low thermal equilibrium temperature prolongs the lifespan of hydraulic components
- Lower noise, improve working environment

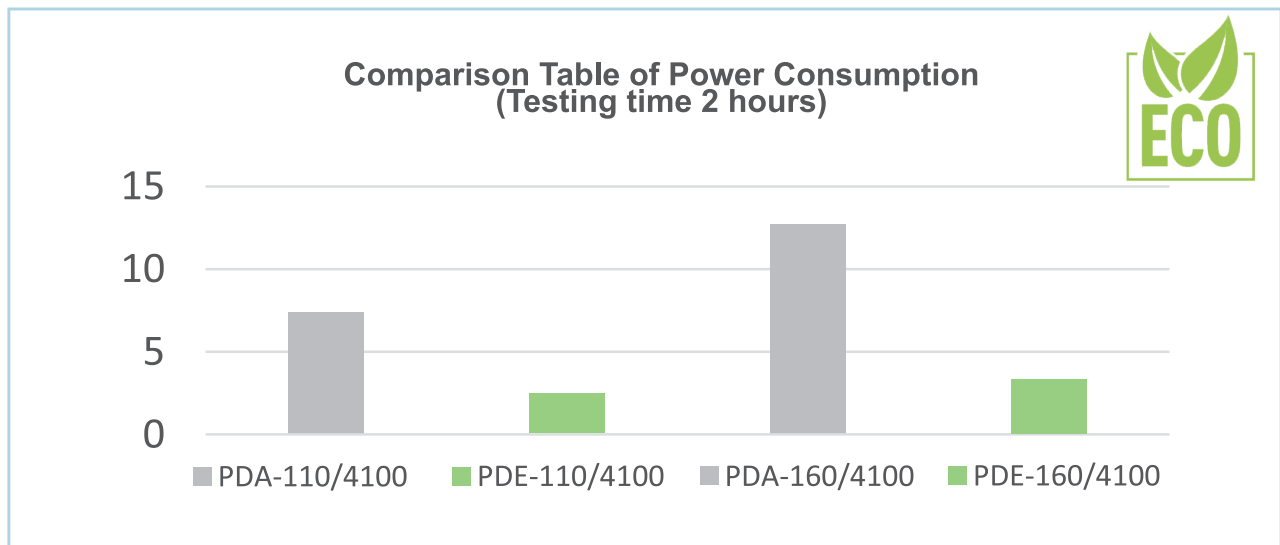




The hydraulic system is driven by left and right dual servo motors, which precisely controls the running speed and pressing force of the slider. The positioning accuracy is high, the response is fast, the operation is smooth, the heat generation is low, and the energy-saving effect is significant (about 75% energy-saving). The amount of hydraulic oil used is small (only 30%), and the hydraulic oil has a long service life because of excellent temperature raising control.

Model		Testing Time	Power Consumption
PDA-160/4100	(Conventional electro-hydraulic) servo press brake	2h	12.7kW/h
PDE-160/4100		2h	3.2kW/h
PDA-110/4100	(Conventional electro-hydraulic) servo press brake	2h	7.4kW/h
PDE-110/4100		2h	2kW/h

Compared with the electro-hydraulic servo CNC press brake, the hybrid oil electric double servo CNC press brake theoretically saves 70% of energy, but actually achieves 75%, while also having the advantages of higher bending speed and low noise



Option



Control System

Delem

Everything under control



53TX

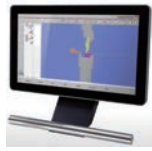


58T

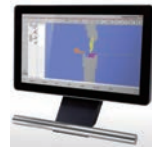


66S

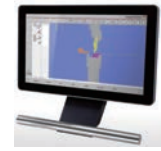
esa AUTOMOTION
The Powerful CNC Intelligence



S830



S840



S850

CYBELEC[®]

1970 to 2020 ... moving ahead



CT8

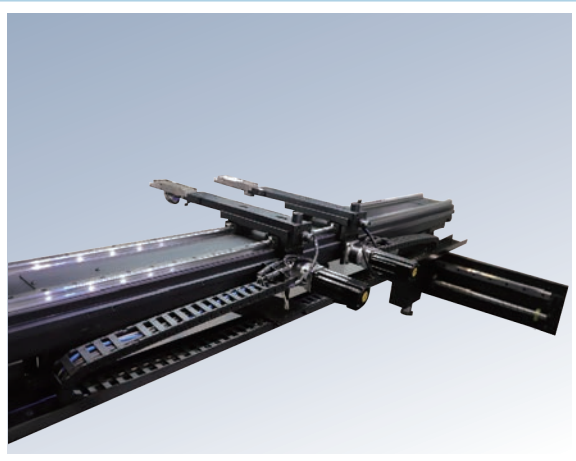


CT12

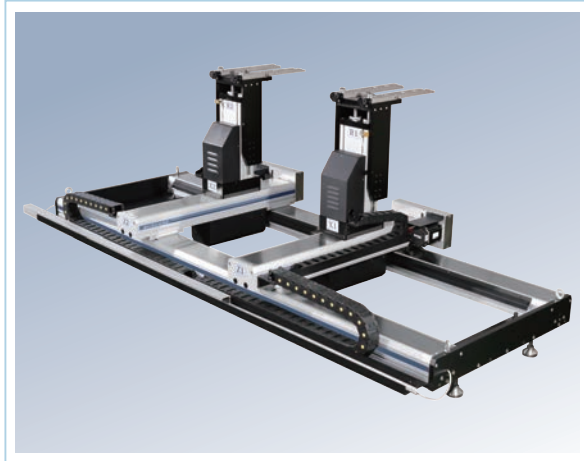


CT15

Back Gauge System



4 Axes Back Gauge
(X,R,Z1,Z2)



6 Axes Back Gauge
(X1,X2,R1,R2,Z1,Z2)



Front Support Device



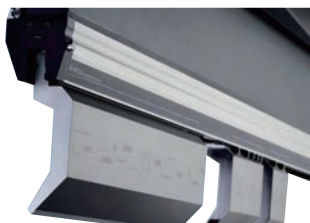
- Standard fixed rotating front support, optional sliding/follow-up model

Laser Protection

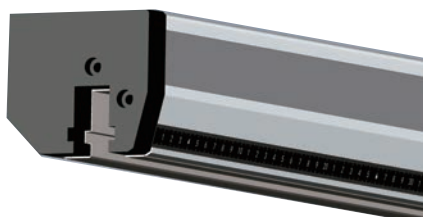


- The laser protection device can provide comprehensive and effective safety protection for the bending machine, protecting the personal safety of the operator

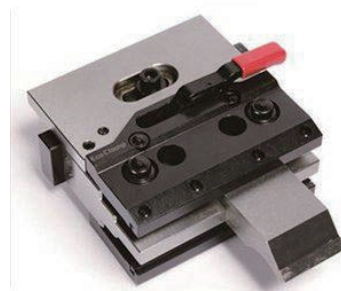
Other Clamping Systems



Hydraulic Clamping



Pneumatic Clamping



Double-sided Quick Clamping



FULL ELECTRIC SERVO CNC PRESS BRAKE



SPECIFICATIONS

Name	Unit	PFE-12/600	PFE-25/1050
Nominal Force	KN	120	250
Axis		3(X,Y,R)	3(X,Y,R)
Bending Length	mm	600	1050
Column Distance	mm	500	800
Cylinder Stroke	mm	120	160
Open Height	mm	420	460
Throat Depth	mm	150	150
Max.Slider Speed	mm/s	200	200
Main Motor Power	KW	5.5	18
Overall Dimensions(L×W×H)	mm	800*1000*1900	1530*1270*2030





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SPECIFICATIONS

Name	Unit	PFE-40/1500	PFE-70/2050
Nominal Force	KN	400	700
Axis		4 (Y1, Y2, X,R)	4 (Y1, Y2, X,R)
Bending Length	mm	1500	2050
Column Distance	mm	1200	1700
Cylinder Stroke	mm	200	200
Open Height	mm	500	500
Throat Depth	mm	300	300
Max.Slider Speed	mm/s	200	200
Main Motor Power	KW	7.5x2	23x2
Overall Dimensions(L×W×H)	mm	1922*1310*2574	2480*1590*2875



HEAVY DUTY CNC PRESS BRAKE



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Features

- Product specifications can be customized according to customer requirements, with a maximum specification of up to 16 meters and 5,600 tons;
- Various structural forms of auxiliary machine configurations are available for customers to choose from;
- Rich tooling design experience is provided to offer the optimal bending solution;
- Supports tandem and multi-machine linkage expansion

Application Fields

- Shipbuilding, construction machinery, electric power towers, lighting poles, bridge steel structures, axle frames, etc.



Parameter Specifications of PDS Series Single Servo CNC Press Brake

Specification	Model Unit	63/2050	63/2550	110/3100	110/4100	160/3100	160/4100	225/3100	225/4100	250/3100	250/4100	
		Bending Force	kN	630	630	1100	1100	1600	1600	2250	2250	2500
Bending Length	mm	2050	2550	3100	4100	3100	4100	3100	4100	3100	4100	
Column Space	mm	1700	2000	2500	3400	2500	3400	2500	3400	2500	3400	
Throat Depth	mm	320	320	400	400	400	400	400	400	400	400	
Cylinder Stroke	mm	160	160	215	215	215	215	215	215	215	215	
Open Height	mm	480	480	535	535	535	535	535	535	535	535	
CNC Axes		4	4+1 (Y1, Y2, X, R, V)									
Main Motor Power	kW	5.5	5.5	8.7	8.7	10.8	10.8	13.2	13.2	13.2	13.2	
Oil Tank Capacity	L	150	200	200	300	300	400	300	400	300	400	
Speed	Approaching	mm/s	200	200	200	200	180	180	120	120	120	120
	Working	mm/s	18	18	14	14	12.5	12.5	11	11	10	10
	Return	mm/s	200	200	180	180	160	160	130	130	115	115
Overall Dimensions	Length	mm	2550	3050	3600	4600	3620	4620	3640	4640	3640	4640
	Width	mm	1330	1330	1425	1425	1490	1490	1720	1720	1770	1770
	Height	mm	2380	2380	2535	2635	2585	2685	2685	2785	2735	2835

Parameter Specifications of PDH Series Heavy-Duty Press Brake

Specification	Model Unit	400/3100	400/4100	500/6000	600/5000	600/6000	600/8000	800/6000	800/8000	1000/6000	1000/8000	1200/8000	1600/8000	1600/12000	
		Bending Force	kN	400	400	5000	6000	6000	6000	8000	8000	10000	10000	12000	16000
Bending Length	mm	3100	4100	6000	5000	6000	8000	6000	8000	6000	8000	8000	8000	12000	
Column Distance	mm	2500	3400	5000	4000	5000	6400	5000	6400	5000	6400	6400	6400	9000	
Throat Depth	mm	400	400	500	500	500	500	600	600	600	600	600	800	800	
Slide Stroke	mm	300	300	300	300	300	300	400	400	400	400	400	500	500	
Open Height	mm	560	560	600	600	600	600	700	700	700	700	700	1000	1000	
CNC Axes		3+1	Y1, Y2, X, V												
Main Motor Power	kW	30	30	37	45	45	45	75	75	90	90	90	2×55	2×55	
Oil Tank Capacity	L	800	1000	1200	1200	1200	1400	1800	1800	1800	2000	2000	3000	3000	
Speed	Approaching	mm/s	100	100	100	90	90	90	80	80	80	80	70	70	70
	Working	mm/s	9	9	8	8	8	8	7	7	7	7	6	6	6
	Return	mm/s	90	90	90	90	90	90	80	80	80	80	60	60	60
Overall Dimensions	Length	mm	3400	4400	6300	5300	6300	8300	6400	8400	6400	8400	8400	8400	12400
	Width	mm	2150	2150	2260	2400	2400	2400	3000	3000	3100	3100	3200	3300	3300
	Height	mm	3300	3330	4500	4200	4500	4600	5200	5400	5300	5800	6000	7000	9000



Bending Tonnage Calculation Table for Ordinary Carbon Steel Plates

Plate Thickness mm	Groove Width mm	Bending Factor	Length mm	Tonnage t/m	Full-Length Bending Tonnage													
					1.2	1.5	2	2.5	3	4	5	6	8	10	12			
0.5	4	1	1	4.1	5	6	8	10	12	16	20	24						
1	6	1	1	10.8	13	16	22	27	33	43	54	65						
1	8	1	1	8.1	10	12	16	20	24	33	41	49						
1.2	8	1	1	11.7	14	18	23	29	35	47	59	70						
1.2	10	1	1	9.4	11	14	19	23	28	37	47	56						
1.5	10	1	1	14.6	18	22	29	37	44	59	73	88						
1.5	12	1	1	12.2	15	18	24	30	37	49	61	73						
2	12	1	1	21.7	26	33	43	54	65	87	108	130	173					
2	16	1	1	16.3	20	24	33	41	49	65	81	98	130					
2.5	16	1	1	25.4	30	38	51	63	76	102	127	152	203					
2.5	20	1	1	20.3	24	30	41	51	61	81	102	122	163					
3	24	1	1	24.4	29	37	49	61	73	98	122	146	195	244				
4	32	1	1	32.5	39	49	65	81	98	130	163	195	260	325	390			
5	40	1	1	40.6	49	61	81	102	122	163	203	244	325	406	488			
6	48	1	1	48.8	59	73	98	122	146	195	244	293	390	488	585			
8	64	1	1	65.0	78	98	130	163	195	260	325	390	520	650	780			
10	100	1	1	65.0	78	98	130	163	195	260	325	390	520	650	780			
10	120	1	1	54.2	65	81	108	135	163	217	271	325	433	542	650			
12	120	1	1	78.0	94	117	156	195	234	312	390	468	624	780	936			
12	140	1	1	66.9	80	100	134	167	201	267	334	401	535	669	802			
16	160	1	1	104.0	125	156	208	260	312	416	520	624	832	1040	1248			
16	180	1	1	92.4	111	139	185	231	277	370	462	555	740	924	1109			
16	200	1	1	83.2	100	125	166	208	250	333	416	499	666	832	998			

Bending Tonnage Calculation Table for Aluminum Plates

Plate Thickness mm	Groove Width mm	Bending Factor	Length mm	Tonnage t/m	Full-Length Bending Tonnage													
					1.2	1.5	2	2.5	3	4	5	6	8	10	12			
0.5	4	0.65	1	2.6	3	4	5	7	8	11	13	16						
1	6	0.65	1	7.0	8	11	14	18	21	28	35	42						
1	8	0.65	1	5.3	6	8	11	13	16	21	26	32						
1.2	8	0.65	1	7.6	9	11	15	19	23	30	38	46						
1.2	10	0.65	1	6.1	7	9	12	15	18	24	30	37						
1.5	10	0.65	1	9.5	11	14	19	24	29	38	48	57						
1.5	12	0.65	1	7.9	10	12	16	20	24	32	40	48						
2	12	0.65	1	14.1	17	21	28	35	42	56	70	85	113					
2	16	0.65	1	10.6	13	16	21	26	32	42	53	63	85					
2.5	16	0.65	1	16.5	20	25	33	41	50	66	83	99	132					
2.5	20	0.65	1	13.2	16	20	26	33	40	53	66	79	106					
3	24	0.65	1	15.8	19	24	32	40	48	63	79	95	127	158				
4	32	0.65	1	21.1	25	32	42	53	63	85	106	127	169	211	254			
5	40	0.65	1	26.4	32	40	53	66	79	106	132	158	211	264	317			
6	48	0.65	1	31.7	38	48	63	79	95	127	158	190	254	317	380			
8	64	0.65	1	42.3	51	63	85	106	127	169	211	254	338	423	507			
10	100	0.65	1	42.3	51	63	85	106	127	169	211	254	338	423	507			
10	120	0.65	1	35.2	42	53	70	88	106	141	176	211	282	352	423			

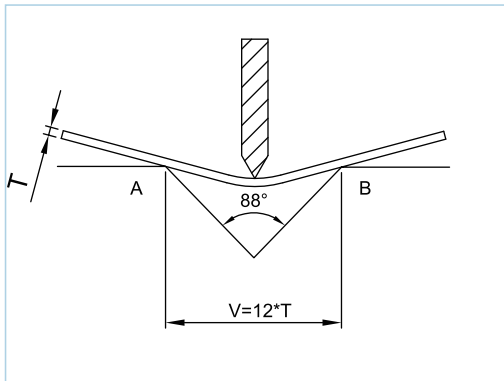
Bending Tonnage Calculation Table for Stainless Steel Plates

Plate Thickness mm	Groove Width mm	Bending Factor	Length mm	Tonnage t/m	Full-Length Bending Tonnage													
					1.2	1.5	2	2.5	3	4	5	6	8	10	12			
0.5	4	1.6	1	6.5	8	10	13	16	20	26	33	39						
1	6	1.6	1	17.3	21	26	35	43	52	69	87	104						
1	8	1.6	1	13.0	16	20	26	33	39	52	65	78						
1.2	8	1.6	1	18.7	22	28	37	47	56	75	94	112						
1.2	10	1.6	1	15.0	18	22	30	37	45	60	75	90						
1.5	10	1.6	1	23.4	28	35	47	59	70	94	117	140						
1.5	12	1.6	1	19.5	23	29	39	49	59	78	98	117						
2	12	1.6	1	34.7	42	52	69	87	104	139	173	208	277					
2	16	1.6	1	26.0	31	39	52	65	78	104	130	156	208					
2.5	16	1.6	1	40.6	49	61	81	102	122	163	203	244	325					
2.5	20	1.6	1	32.5	39	49	65	81	98	130	163	195	260					
3	24	1.6	1	39.0	47	59	78	98	117	156	195	234	312	390				
4	32	1.6	1	52.0	62	78	104	130	156	208	260	312	416	520	624			
5	40	1.6	1	65.0	78	98	130	163	195	260	325	390	520	650	780			
6	48	1.6	1	78.0	94	117	156	195	234	312	390	468	624	780	936			
8	64	1.6	1	104.0	125	156	208	260	312	416	520	624	832	1040	1248			
10	100	1.6	1	104.0	125	156	208	260	312	416	520	624	832	1040	1248			
10	120	1.6	1	86.7	104	130	173	217	260	347	433	520	693	867	1040			

Bending Tonnage Calculation Table for Q345/Q355 Plates

Plate Thickness mm	Groove Width mm	Bending Factor	Length mm	Tonnage t/m	Full-Length Bending Tonnage													
					1.2	1.5	2	2.5	3	4	5	6	8	10	12			
3	24	1.55	1	37.8	45	57	76	94	113	151	189	227	302	378	453			
4	32	1.55	1	50.4	60	76	101	126	151	202	252	302	403	504	605			
5	40	1.55	1	63.0	76	94	126	157	189	252	315	378	504	630	756			
6	48	1.55	1	75.6	91	113	151	189	227	302	378	453	605	756	907			
8	64	1.55	1	100.8	121	151	202	252	302	403	504	605	806	1008	1209			
10	100	1.55	1	100.8	121	151	202	252	302	403	504	605	806	1008	1209			
10	120	1.55	1	84.0	101	126	168	210	252	336	420	504	672	840	1008			
12	120	1.55	1	120.9	145	181	242	302	363	484	605	725	967	1209	1451			
12	140	1.55	1	103.6	124	155	207	259	311	415	518	622	829	1036	1244			
16	160	1.55	1	161.2	193	242	322	403	484	645	806	967	1290	1612	1934			
16	180	1.55	1	143.3	172	215	287	358	430	573	716	860	1146	1433	1719			
16	200	1.55	1	129.0	155	193	258	322	387	516	645	774	1032	1290	1548			
20	200	1.55	1	201.5	242	302	403	504	605	806	1008	1209	1612	2015	2418			
20	220	1.55	1	183.2	220	275	366	458	550	733	916	1099	1465	1832	2198			
20	240	1.55	1	167.9	202	252	336	420	504	672	840	1008	1343	1679	2015			
25	300	1.55	1	209.9	252	315	420	525	630	840	1049	1259	1679	2099	2519			
25	320	1.55	1	196.8	236	295	394	492	590	787	984	1181	1574	1968	2361			
25	340	1.55	1	185.2	222	278	370	463	556	741	926	1111	1482	1852	2222			





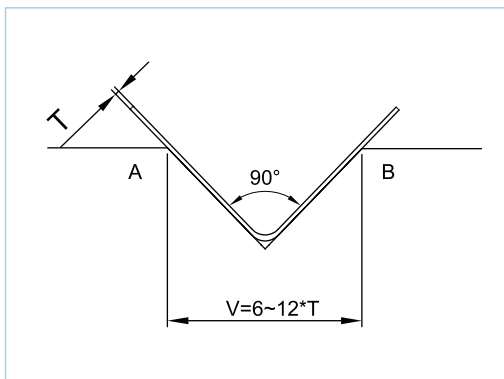
■ Free (Air) Bending

$$V = 12t \sim 15t$$

Inside bending radius $R = 2t \sim 2.5t$

Bending accuracy: $\pm 45'$ or better

A larger bending radius can be formed, with the bending angle range controllable freely.



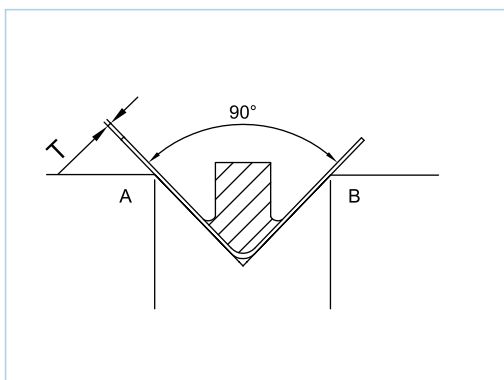
■ Coining Bending

$$V = 6t \sim 12t$$

Inside bending radius $R = 1t \sim 2t = V/6$

Bending accuracy: $\pm 30'$

Good bending accuracy can be achieved with relatively low pressure.



■ Bottoming Bending

$$V = 5t$$

Inside bending radius $R = 0.5t \sim 0.8t$

Bending accuracy: $\pm 15'$

Extremely high bending accuracy can be obtained, and the required bending pressure is 5-8 times that of coining bending.



TANDEM PRESS BRAKE

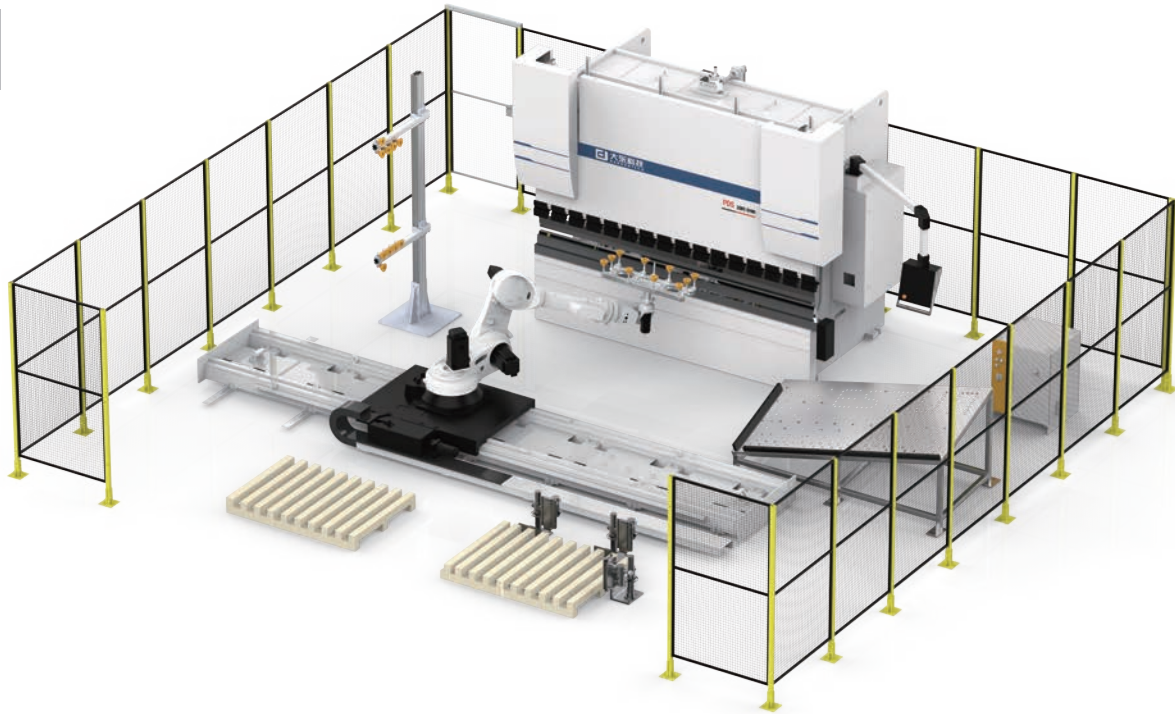


Features

- Customizable for tandem linkage as required; it can work either in two-machine mode or single - machine mode, featuring high efficiency and flexibility.
- Specially customized mechanical deflection compensation, with the CNC system automatically adjusting and compensating, making it convenient and precise.
- Flexible operation methods increase the utilization rate of the machine tool, reduce energy consumption and save costs.
- All models in the PD series can be designed for tandem.



ROBOT BENDING CELL



SPECIFICATIONS

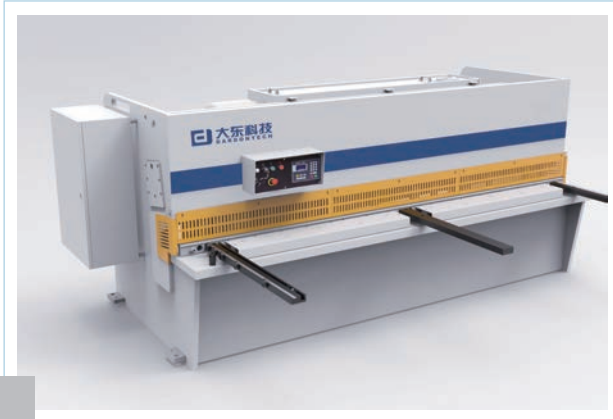
Model		ER80
Type of Motion		Articulated Type
Degree of Motion Freedom		6
Maximum Speed	Axis J1	114°/sec
	Axis J2	108°/sec
	Axis J3	137°/sec
	Axis J4	255°/sec
	Axis J5	197°/sec
	Axis J6	285°/sec
Working Range	Axis J1	±185°
	Axis J2	-67°~+150°
	Axis J3	-190°~+66°
	Axis J4	±200°
	Axis J5	±130°
	Axis J6	±360°
	Axis J7	Minimum Customization Length:5 meters
Maximum Working Radius		2565mm
Robot Body Mass		740Kg
Maximum Payload		80Kg
Repeat Positioning Accuracy		±0.04mm
Protection Class		IP65
Power		11.5KW



TYPICAL APPLICATIONS



SHEARING MACHINE & CNC FEEDING TABLE



SPECIFICATIONS

Name	Unit	4x2500	6x3200	6x4000	8x3200	8x4000	12x3200	12x4200
Sheet Thickness	mm	4	6	6	8	8	12	12
Max. Sheet Width	mm	2500	3200	4000	3200	4000	3200	4000
Shearing Angel	°	1.5	1.5	1.5	1.5	1.5	2	2
Strokes	hit/min	20	18	15	12	10	9	7
Back-gauge Stroke	mm	600	600	600	600	600	800	800
Table Height	mm	800	800	800	800	800	820	920
Throat Depth	mm	120	120	120	120	120	170	170
Main Motor Power	kW	5.5	7.5	7.5	11	11	15	15
Dimension(L×W×H)	mm	3350×1600 ×1700	4050×1600 ×1700	4850×1900 ×1850	4050×1600 ×1700	4850×1900 ×1850	4050×1600 ×1700	5020×2250 ×2200

