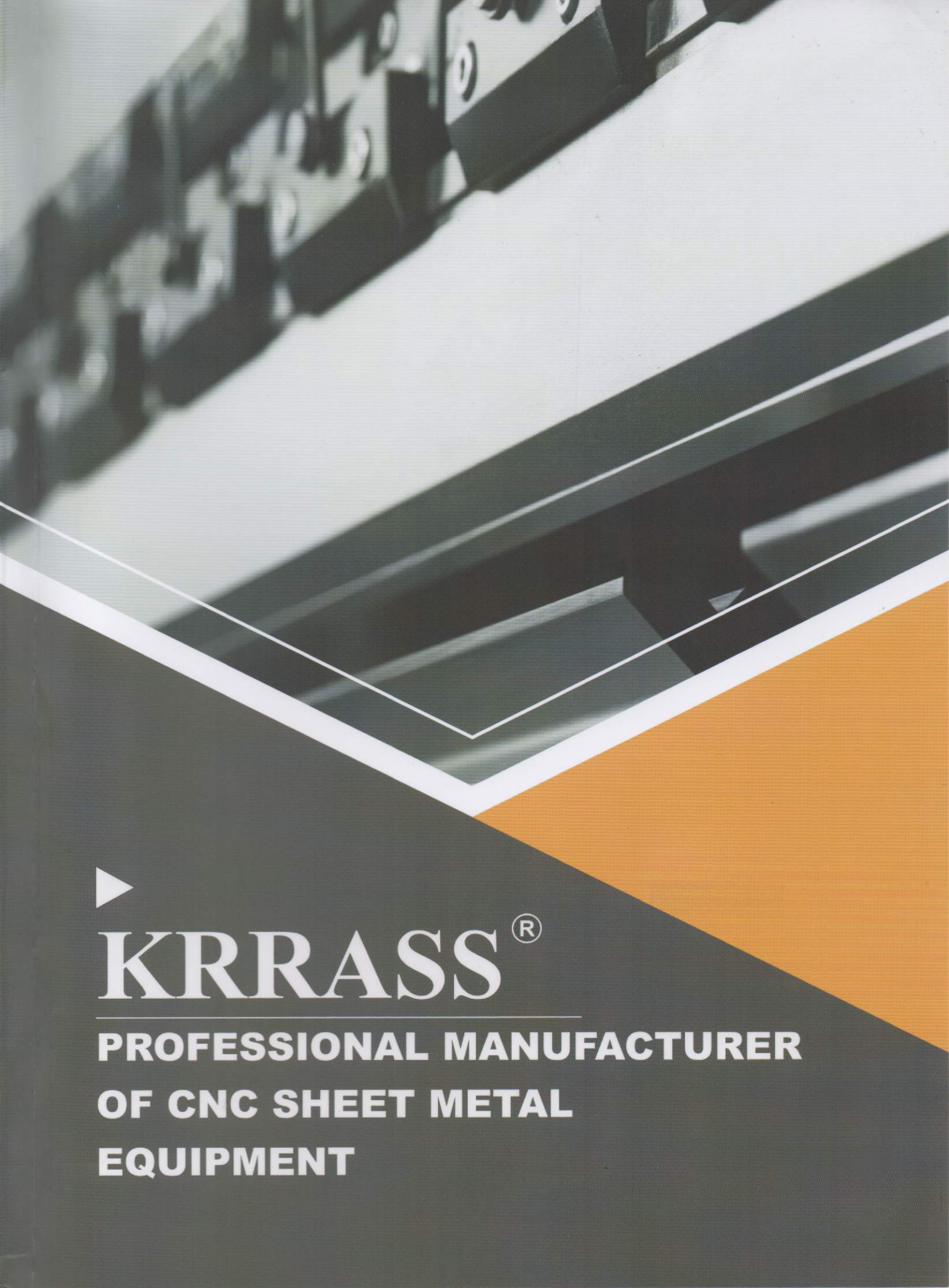


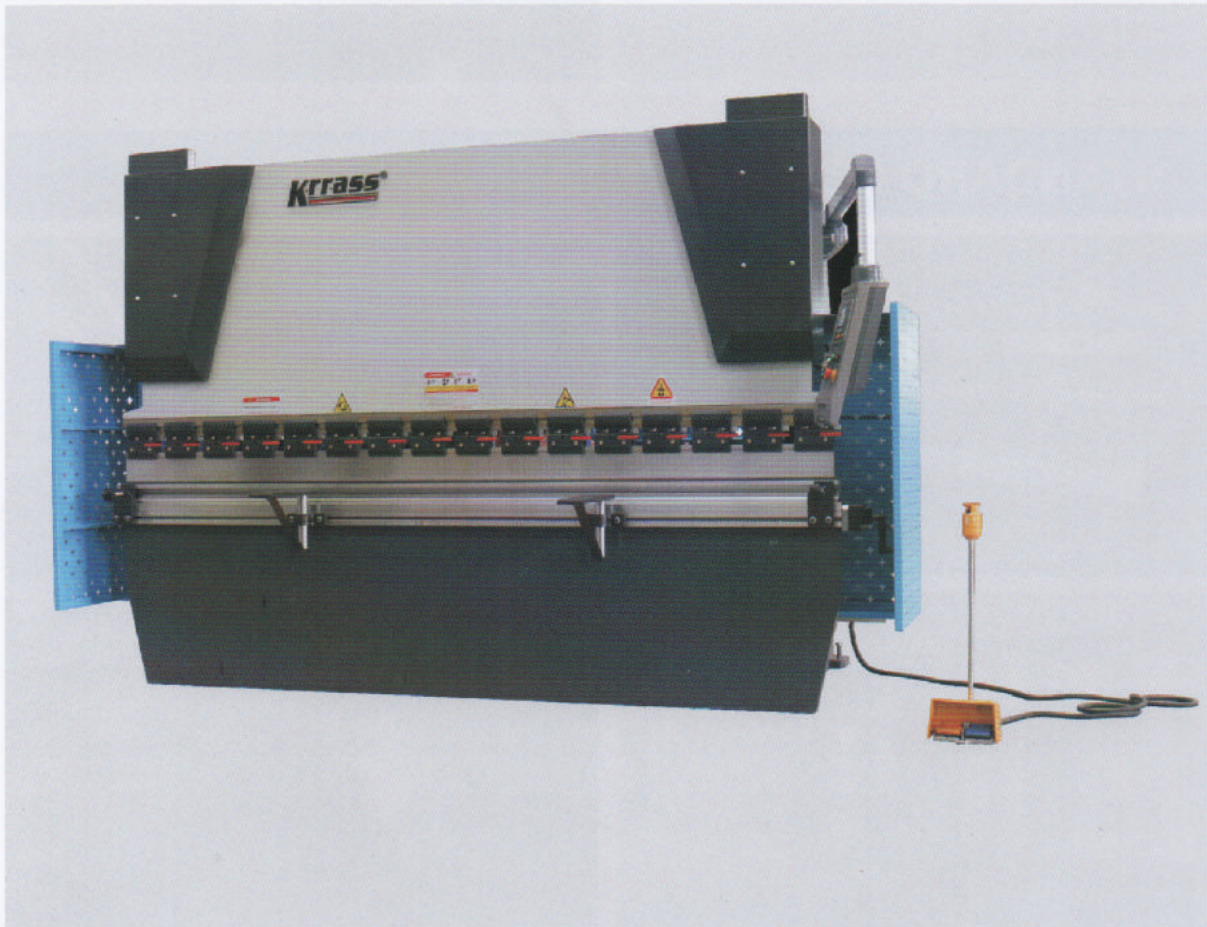


► **KRRASS[®]**

**PROFESSIONAL MANUFACTURER
OF CNC SHEET METAL
EQUIPMENT**

PBA Series

Hydraulic NC Press Brake



Main Components:

- Estun E200P double-servo controller
- Controls and adjusts Y-axis and X-axis
- Servo drive and control the positioning of X-axis and Y-axis
- Taiwan HIWIN ball screw and linear guide rail, accuracy of 0.05mm
- Front Support Arms
- Germany Bosch Rexroth hydraulic valve block
- Germany EMB oil tube connector
- Germany Siemens main motor
- France Schneider electrics
- Hydraulic & electrical overload protection
- Upper and lower dies (86°, R 0.6mm, material: 42CrMo)

Estun E200P CNC controller

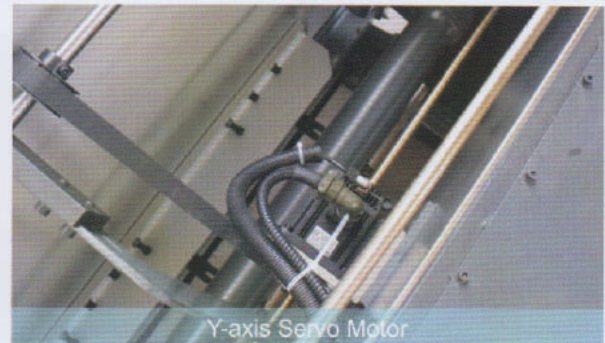
- 240X128 LCD display
- 40 programs, each program have 25 steps
- X and Y axes double servo control
- Control accuracy 0.01mm
- Unilateral positioning function
- Retract function
- Auto retrieval function
- Power-off memory
- Diagnostic function
- mm/inch
- In Chinese/English



STANDARD COMPONENTS



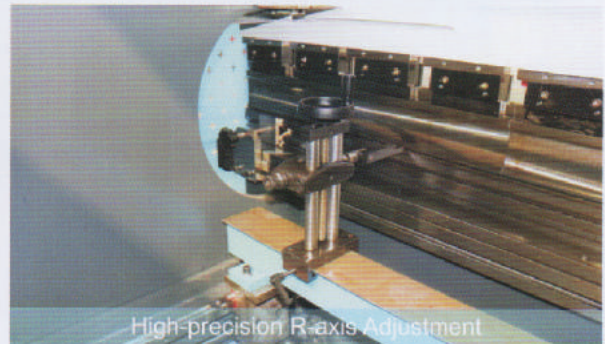
X-axis Servo Motor



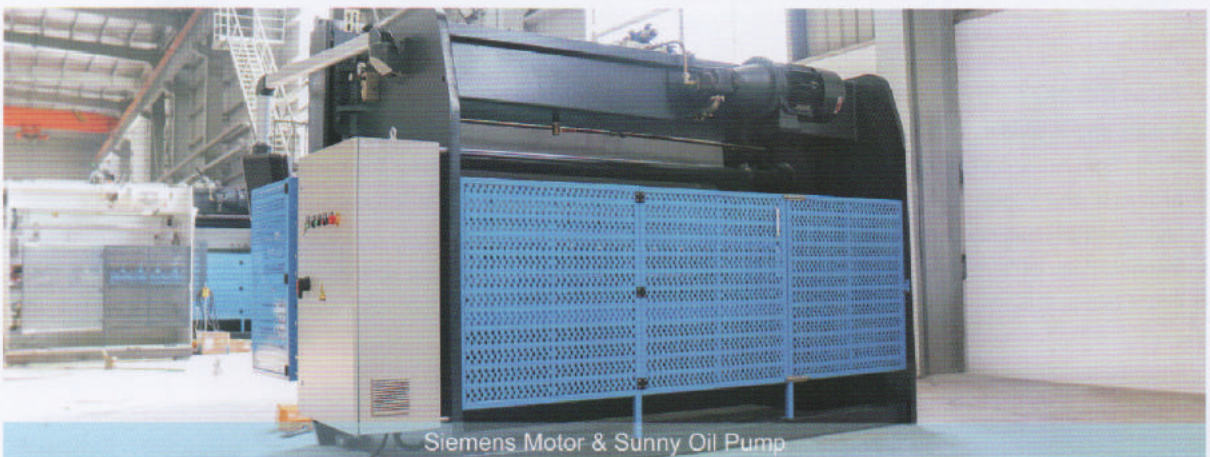
Y-axis Servo Motor



Servo Drive



High-precision R-axis Adjustment



Siemens Motor & Sunny Oil Pump

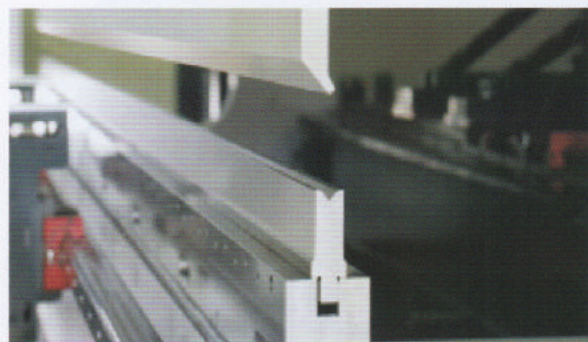
Rich Configuration Flexible Match

Lower Tool Clamp



2V-"T" Quick Change Bottom Die Clamping (standard)

Adopt 2-V quick change clamping, single V clamping and single-V hydraulic clamping are options; multi-V bottom die and worktable is option



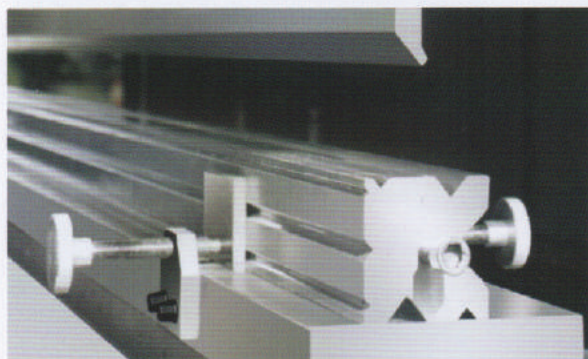
Single-V Bottom Die Clamping (option)

Single V bottom die clamping, high precision for tool, easy for tool angle, narrow tool width, suitable for complicated turn-over bending workpiece



Single V CNC Hydraulic Bottom Die Clamping (option)

WILA bottom die clamping device, clamping loose action controlled by electric automatically, much easier and efficient for tool changes



Multi-v Bottom Die Clamping (option)

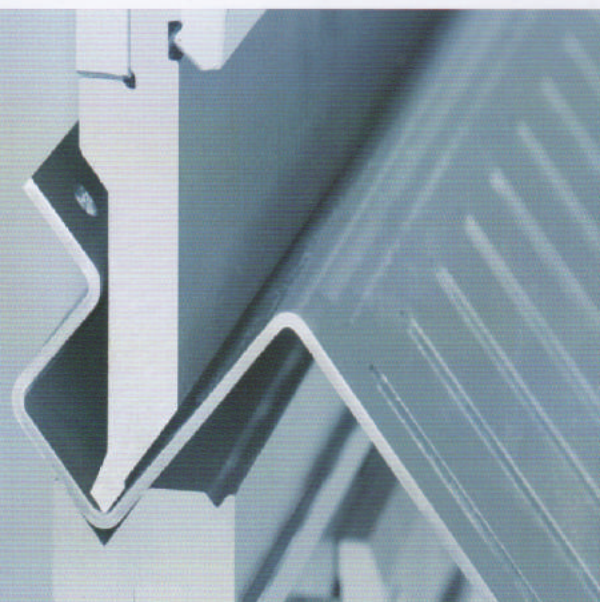
Multi-V bottom die with different openings

Model	Bending Pressure (kn)	Bending Length (mm)	Column Distance (mm)	Throat Depth (mm)	Slider Stroke (mm)	Max Opening Height (mm)	X-axis Max Distance (mm)	Sliding Front Supporting Arms (Pcs)	Back stopper (PCS)	Main Motor (kw)	Length×Width×Height (mm)	Weight (T)
30T/1600	300	1600	950	230	100	320	300	2	2	3	1800×1200×1620	2000
40T/1600	400	1600	950	230	100	320	300	2	2	3	1800×1200×1820	2500
40T/2200	400	2200	1850	230	100	320	500	2	2	5.5	2200×1200×1900	2750
40T/2500	400	2500	1850	230	100	320	500	2	2	5.5	2500×1200×1900	3000
50T/2500	500	2500	1850	230	100	320	500	2	2	5.5	2500×1200×2000	3400
63T/2500	630	2500	1900	250	100	320	500	2	2	5.5	2500×1300×2210	4000
63T/3200	630	3200	2560	250	100	320	500	2	3	5.5	3200×1300×2210	4800
80T/2500	800	2500	1990	300	100	320	500	2	2	7.5	2500×1400×2300	5000
80T/3200	800	3200	2560	320	100	350	500	2	3	7.5	3200×1500×2300	6000
80T/4000	800	4000	3200	320	100	350	500	2	4	7.5	4000×1500×2400	7000
100T/2500	1000	2500	1990	320	120	350	500	2	2	7.5	2500×1600×2400	6000
100T/3200	1000	3200	2800	320	150	400	500	2	3	7.5	3200×1600×2600	6800
100T/4000	1000	4000	3200	320	150	400	500	2	4	7.5	4000×1600×2600	8000
125T/3200	1250	3200	2800	320	150	400	500	2	3	11	3200×1600×2600	7000
125T/4000	1250	4000	3200	320	150	400	500	2	4	11	4000×1600×2600	8500
160T/3200	1600	3200	2580	320	200	460	500	2	3	11	3200×1700×2700	10000
160T/4000	1600	4000	2900	320	200	460	500	2	4	11	4000×1700×2800	11000
160T/5000	1600	5000	3900	320	200	460	500	2	5	11	5000×1900×3100	13500
160T/6000	1600	6000	4900	320	200	460	500	2	6	11	6300×1900×3200	18500
200T/3200	2000	3200	2480	320	200	460	500	2	3	11	3200×1950×2800	11000
200T/4000	2000	4000	2900	320	200	460	500	2	4	11	4000×1950×2800	12500
200T/5000	2000	5000	3900	320	200	460	500	2	5	11	5000×1950×3000	14000
200T/6000	2000	6000	4900	320	200	460	500	2	6	11	6000×1950×3300	20000
250T/3200	2500	3200	2450	400	250	590	500	2	3	18.5	3250×2000×3200	18500
250T/4000	2500	4000	2900	400	250	590	500	2	4	18.5	4000×2000×3400	20000
250T/5000	2500	5000	3900	400	250	590	500	2	5	18.5	5000×2000×3400	23000
250T/6000	2500	6000	4900	400	250	590	500	2	6	18.5	6000×2000×3400	27000
300T/3200	3000	3200	2450	400	250	590	500	2	3	22	3200×2000×3450	20500
300T/4000	3000	4000	2900	400	250	590	500	2	4	22	4000×2000×3450	22000
300T/5000	3000	5000	3900	400	250	590	500	2	5	22	5000×2000×3450	25000
300T/6000	3000	6000	4900	400	250	590	500	2	6	22	6000×2000×3450	28500
400T/3200	4000	3200	2400	400	250	590	500	2	3	30	3200×2180×3400	22500
400T/4000	4000	4000	2900	400	250	590	500	2	4	30	4000×2180×3400	25000
400T/5000	4000	5000	3900	400	250	590	500	2	5	30	5000×2180×3500	29000
400T/6000	4000	6000	4900	400	250	590	500	2	6	30	6000×2180×3800	34000
500T/5000	5000	5000	3900	400	250	590	500	2	5	45	5050×3500×3700	42000
500T/6000	5000	6000	4900	400	320	590	500	2	6	45	6050×3500×3700	54000
600T/4000	6000	4000	2900	400	320	590	500	2	4	55	4050×4500×3700	44000
600T/6000	6000	6000	4900	400	320	590	500	2	6	55	6050×4500×3700	80000

Force Chart For Press Brake

V	4	6	8	10	12	14	16	18	20	24	28	32	36	40	45	50	55	60	65	70	80	90	100	120			
B	2.8	4	5.5	7	8.5	10	11	12.5	14	17	20	22	25	28	31	35	38	42	46	49	56	63	70	85			
R	0.7	1	1.3	1.6	2	2.3	2.6	3	3.3	3.8	4.5	5	6	6.5	7	8	9	10	10.5	11	16	14	16	19			
S	0.5	40	30																								
	0.6	60	40	30	30									This chart is calculated according to the plate of tensile strength $\sigma_b=450\text{N/mm}^2$ and length $L=1\text{m}$, the force can be got according to the proportion while different kind of plate and different length to be bent.													
	0.8		70	50	40	30																					
	1		110	80	70	60																					
	1.2			120	100	80	70	60																			
	1.5				150	120	110	90	80																		
	2					220	190	170	150	130	110																
	2.5						250	220	200	170	150	130															
	3							330	290	250	210	180	160														
	3.5								400	330	290	250	220	200	180												
	4									440	370	330	290	260	230	210											
	4.5										470	410	370	330	300	270	240										
	5											510	450	400	360	330	300	270	250								
	6														520	470	430	390	360	340	300						
8																	700	640	600	520	460	420					
10																				810	720	650					
12																						950	780				
14																							1300	1100			

This chart is calculated according to the plate of tensile strength $\sigma_b=450\text{N/mm}^2$ and length $L=1\text{m}$, the force can be got according to the proportion while different kind of plate and different length to be bent.



Calculation Formula:

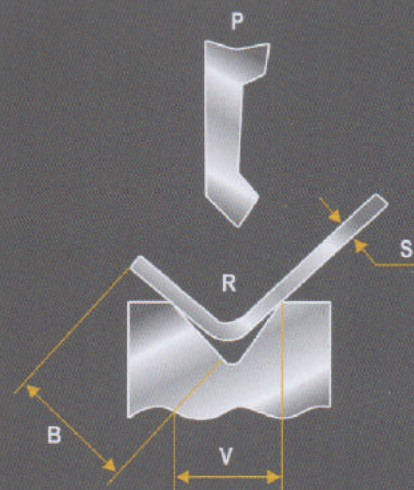
$$P=650s^2l/v(\sigma_b=450\text{n/mm}^2)$$

P: Bending force(kn)

S: The thickness of the plate(mm)

L: The width of the plate(m)

V: V-width of the bottom die(mm)



Components	"√"-included "x"- none "○"- Optional	E21	E200P	DA41	DA53T	DA58T	DA66T
Electrics	Schneider - France	√	√	√	√	√	√
Inverter	DELTA - Taiwan	√	x	x	x	x	x
Servomotor	Estun - China	x	√	√	√	√	√
Electric Cabinet	Open Door Power Off	√	√	√	√	√	√
Hydraulics	Bosch Rexroth - Germany	√	√	√	√	√	√
Foot Switch	Kacon - South Korea	√	√	√	√	√	√
Oil Pump	Sunny - USA	√	√	√	x	x	x
	Bosch Rexroth - Germany	x	x	x	√	√	√
Backgauge	Ball Screw & Polished Rod -Taiwan HIWIN	√	x	x	x	x	x
	Ball Screw & Linear Guide rail -Taiwan HIWIN	x	√	√	√	√	√
X-axis Motor	Step Motor	√	x	x	x	x	x
	Servomotor - Estun	x	√	√	√	√	√
Y-axis Motor	Step Motor	√	x	x	x	x	x
	Servomotor - Estun	x	√	√	√	√	√
Y-axis Grating Ruler	FAGOR -Spain / Heidenhain - Germany	x	x	x	√	√	√
Main Motor	Siemens - Germany	√	√	√	√	√	√
Oil Tube	EMB - Germany	√	√	√	√	√	√
Slide Safe Guard		√	√	√	√	√	√
Slide Rear Guard		√	√	√	√	√	√
Rear Light Curtain Protection		○	○	○	○	○	○
Quick Clamp		○	√	√	√	√	√
Normal Clamp		√	x	x	x	x	x
Front Light Curtain Protection		○	○	○	○	○	○
Front Laser Protection		○	○	○	○	○	○
V-axis Manual Crowning		○	○	○	x	x	x
X-axis		√	√	√	√	√	√
Y-axis		√	√	√	x	x	x
Y1,Y2-axes		x	x	x	√	√	√
R-axis		x	x	x	○	○	○
Z1,Z2-axes		x	x	x	x	○	○
R1,R2-axes		x	x	x	x	○	○
X1,X2-axes		x	x	x	x	○	○
Air Cooling System		○	○	○	○	○	○