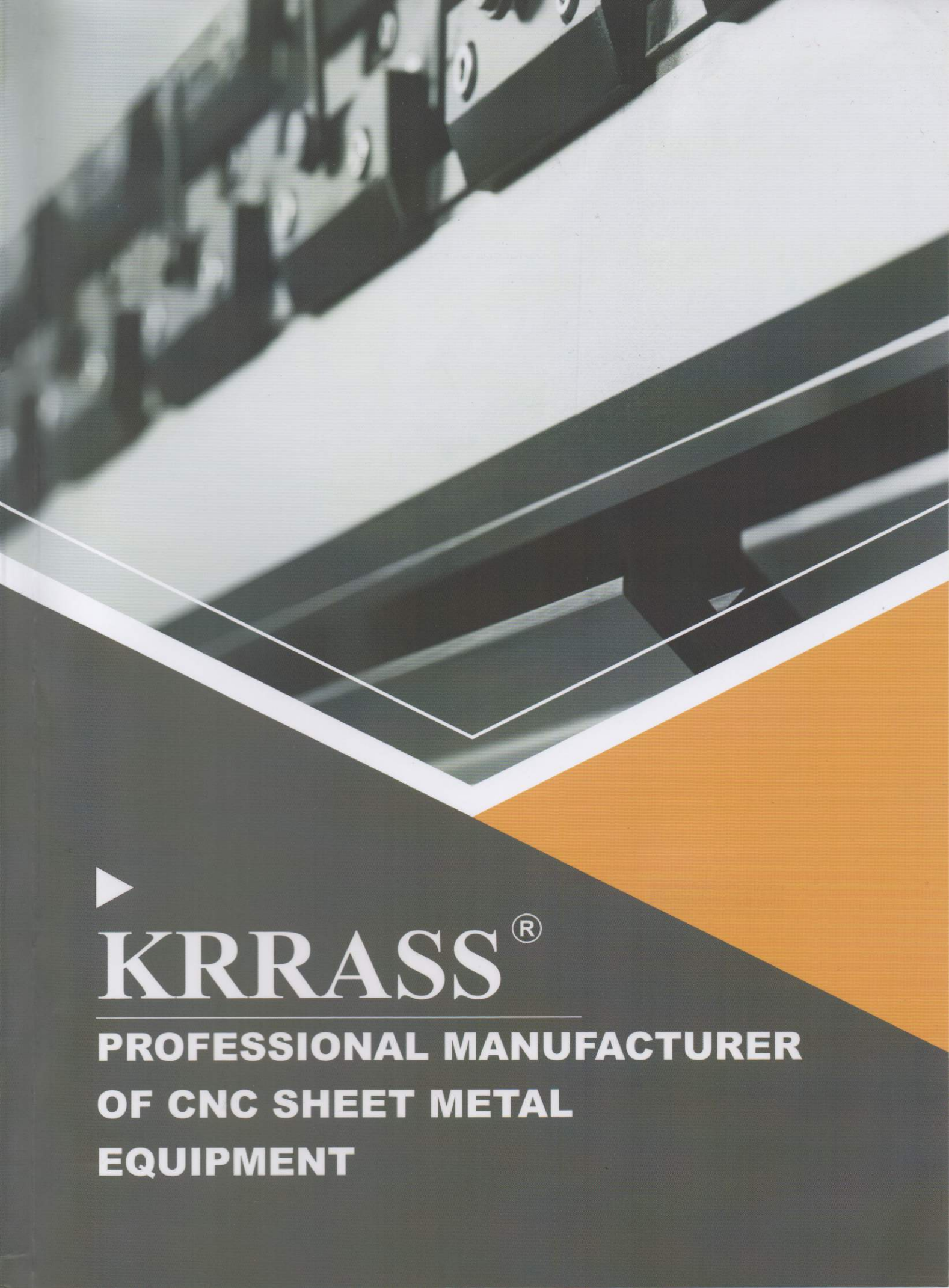


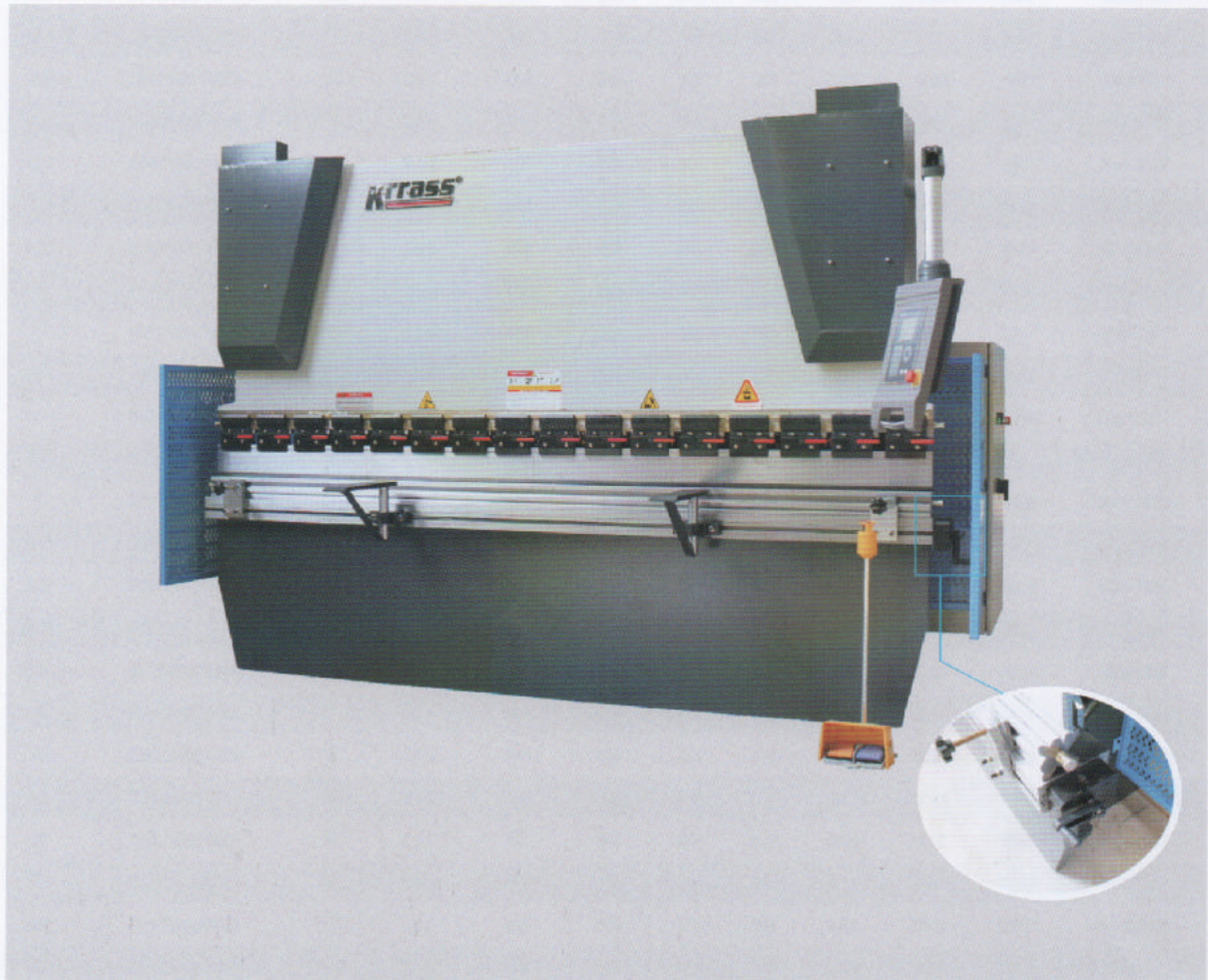
A close-up, high-angle photograph of a CNC sheet metal machine. The image shows the complex mechanical components, including rollers and guides, which are used to shape and cut metal sheets. The lighting is dramatic, highlighting the metallic surfaces and creating strong shadows. A large, white, geometric shape, resembling a stylized 'K' or a series of parallel lines, is overlaid on the right side of the image, extending from the top right towards the bottom right. This shape is composed of several parallel lines that create a sense of depth and movement.

▶ **KRRASS[®]**

**PROFESSIONAL MANUFACTURER
OF CNC SHEET METAL
EQUIPMENT**

PBH Series

Hydraulic CNC Press Brake



Standard Components:

- Delem DA41S CNC Control System
- Powered Depth Y-axis & Back gauge X-axis
- Servo Motor Controlled Back gauge
- HIWIN Ball screws & Polished rod with 0.01 mm accuracy
- Front Support Arms
- Germany Bosch-Rexroth Hydraulic
- Germany EMB Tubing Connector
- Germany Siemens Main Motor
- Telemecanique/Schneider Electronics
- Hydraulic & Electrical overload protection
- Top and Bottom Tooling (86° & R 0.6mm)
- Manual Crowning system homogenizes bending

Delem DA41S CNC controller

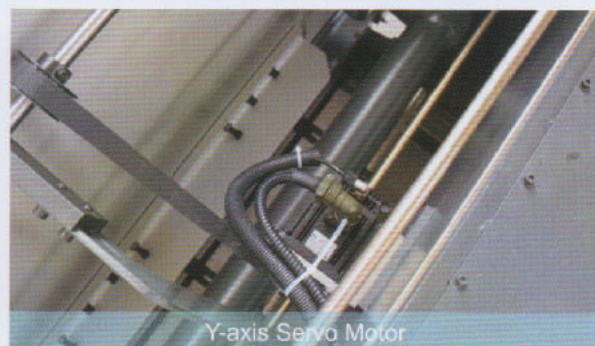
- High-definition LCD display
- Control ram position
- Backgauge control
- Angle programming
- Setting die parameters
- Material-escaping control function
- 100 programs, 25 process steps per program
- Servo motor control, servo drive control
- Die library
- mm / inch
- Chinese / English



STANDARD COMPONENTS



X-axis Servo Motor



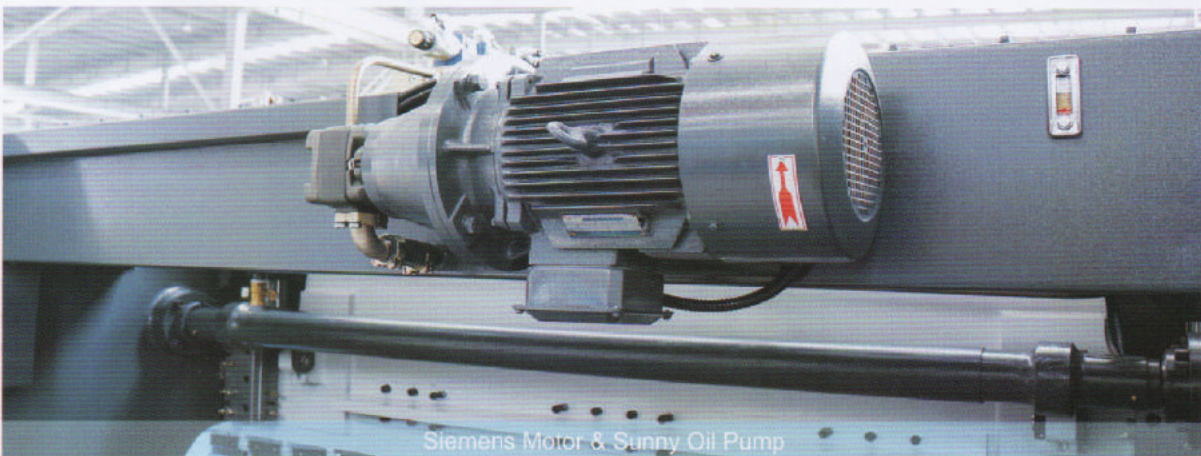
Y-axis Servo Motor



Servo Drive



Taiwan HIWIN Linear Guide Rail



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



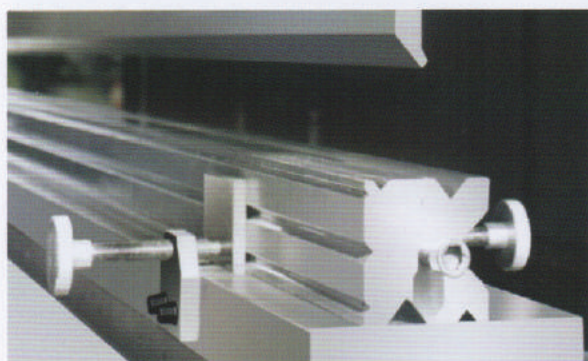
Single-V Bottom Die Clamping (option)

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)

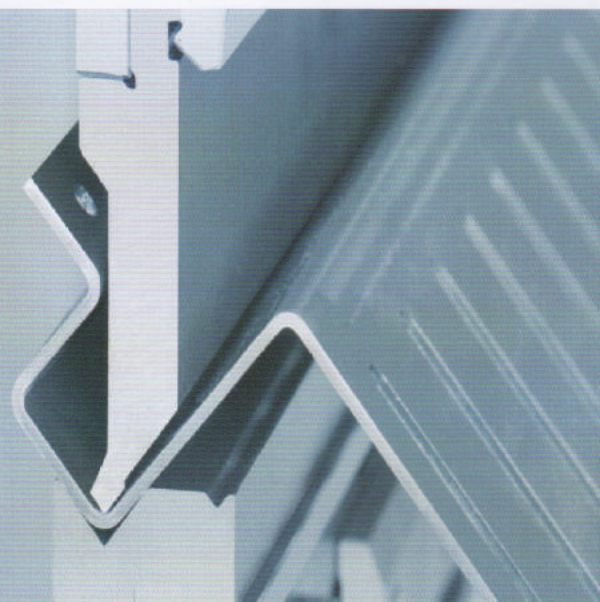
Multi-V bottom die with different openings

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																			
	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:

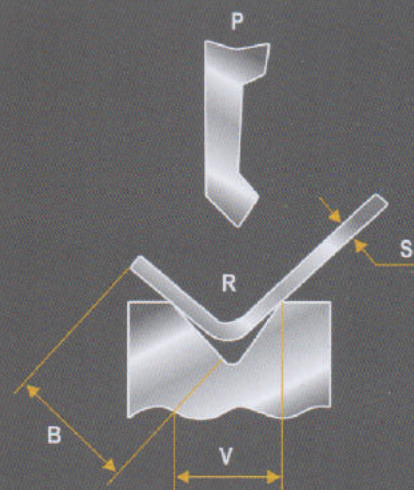
$$P=650s^2l/v(\sigma_b=450\text{n/mm}^2)$$

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		○	○	○	○	○	○